

636480

REPORT NUMBER: 214-CAL-03-02

**SAFETY COMPLIANCE TESTING FOR FMVSS 214
SIDE IMPACT PROTECTION**

**DAIMLERCHRYSLER CORPORATION
2003 CHRYSLER PT CRUISER
MPV**

NHTSA NUMBER: C30301

**VERIDIAN ENGINEERING
TRANSPORTATION SCIENCES CENTER
P.O. BOX 400
BUFFALO, NEW YORK 14225**



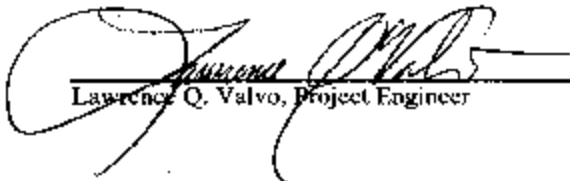
February 20, 2003

FINAL REPORT

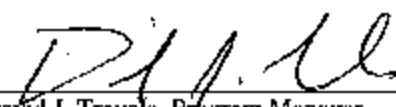
**U. S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Safety Assurance
Office of Vehicle Safety Compliance
400 Seventh Street, SW
Room 6111 (NVS-220)
Washington, DC 20590**

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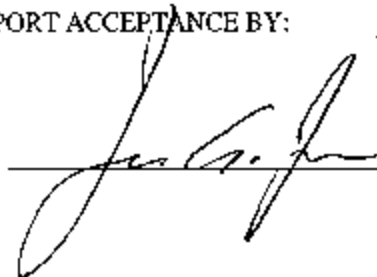

David J. Travale, Program Manager
Transportation Sciences Center

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16. Abstract <p>A 48/24 kph 90° Impact Moving Deformable Barrier Side Impact Test was conducted on the subject 2003 Chrysler PT Cruiser MPV in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-214D-06 (July 26, 2001) to determine FMVSS 214 Side Impact Protection compliance. This test was conducted at the Veridian Engineering Crash Test Facility in Buffalo, New York, on February 20, 2003.</p> <p>The impact velocity of the Moving Deformable Barrier (MDB) was 53.27 kph, and the ambient temperature at the struck (driver's) side of the target vehicle at the time of impact was 20.0°C. The target vehicle post test maximum crush was 186 mm at level 3.</p> <p>The test vehicle's performance follows:</p> <table border="0" style="width: 100%;"> <thead> <tr> <th></th> <th align="center"><u>Front SID</u></th> <th></th> <th align="center"><u>Rear SID</u></th> </tr> </thead> <tbody> <tr> <td>Left Upper Rib Acceleration (LUR):</td> <td align="center">57</td> <td align="center">g's</td> <td align="center">42</td> </tr> <tr> <td>Left Lower Rib Acceleration (LLR):</td> <td align="center">69</td> <td align="center">g's</td> <td align="center">44</td> </tr> <tr> <td>Lower Spine Acceleration (T₁₂):</td> <td align="center">54</td> <td align="center">g's</td> <td align="center">52</td> </tr> <tr> <td>Thoracic Trauma Index (TTI):</td> <td align="center">61</td> <td align="center">g's</td> <td align="center">48</td> </tr> <tr> <td>Pelvis Acceleration (PEV):</td> <td align="center">39</td> <td align="center">g's</td> <td align="center">63</td> </tr> </tbody> </table> <p>The driver door unlatched from the striker during the impact event. The door did not separate from the body at the hinges and remained closed due to sheet metal deformation. Door closure was documented and verified on real time film prior to the impact. The left rear passenger door did not separate from the body at the hinges or latches and the opposite doors did not open during the side impact event.</p>							<u>Front SID</u>		<u>Rear SID</u>	Left Upper Rib Acceleration (LUR):	57	g's	42	Left Lower Rib Acceleration (LLR):	69	g's	44	Lower Spine Acceleration (T ₁₂):	54	g's	52	Thoracic Trauma Index (TTI):	61	g's	48	Pelvis Acceleration (PEV):	39	g's	63
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SECTION 1

PURPOSE AND TEST PROCEDURE

This side impact test is part of the FMVSS 214 Side Impact Protection Compliance Test Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-02 D 01114. The purpose of this test was to evaluate side impact protection in a 2003 Chrysler PT Cruiser MPV. The test was conducted in accordance with the Office of Vehicle Safety Compliance's Laboratory Test Procedure (TP-214D-06, dated July 26, 2001).

SECTION 2

SUMMARY OF SIDE IMPACT TEST

A 2003 Chrysler PT Cruiser MPV was impacted on the left or driver's side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the monorail at a velocity of 53.27 kph (33.1 mph). The target vehicle was stationary and was positioned at an angle of 63° to the line of forward motion. The side impact test was conducted by the Veridian Engineering Transportation Sciences Center in Buffalo, New York on February 20, 2003. Pre- and post-test photographs of the test vehicle, the moving deformable barrier (MDB), and the side impact dummies (SIDs) are included in Appendix A.

Two restrained Side Impact Dummies (SIDs) were placed in the driver (Pos. #1) and left rear (Pos. #4) designated seating positions according to the instructions specified in the OVSC Side Impact Laboratory Test Procedure (TP-214D-06, dated July 26, 2001). Both SIDs were certified prior to this test. The side impact test was documented by one real-time camera and 9 high-speed cameras. Camera locations and other pertinent camera information are included in this report.

The SIDs were instrumented with the following accelerometers:

1. Left Upper Rib (LUR) uniaxial and redundant accelerometer (Y-direction)
2. Left Lower Rib (LLR) uniaxial and redundant accelerometer (Y-direction)
3. Lower Thoracic Spine (T₁₂) uniaxial and redundant accelerometer (Y-direction)
4. Pelvic (PEV) section uniaxial and redundant accelerometer (Y-direction)
5. Head triaxial accelerometers (X-, Y- and Z-direction)

A summary of the side impact dummy (SID) configuration and verification test data can be found in Appendix C. A total of 48 channels of data were recorded. Appendix B contains the vehicle, MDB and dummy response data traces.

The following table summarizes the results of the test.

Injury Criteria	Front SID	Rear SID
TTI (g)	61	48
PEV (g)	39	63

FMVSS 214D requires that the TTI not exceed 85 g's for 4 door vehicles and not exceed 90 g's for 2 door vehicles. Peak lateral pelvis acceleration shall not exceed 130 g's.

The driver door unlatched from the striker during the impact event. The door did not separate from the body at the hinges and remained closed due to sheet metal deformation. Door closure was documented and verified on real time film prior to the impact. The left rear passenger door did not separate from the body at the hinges or latches and the opposite doors did not open during the side impact event.

SECTION 3

SUMMARY OF TEST RESULTS

DATA SHEET J

GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 2003 Chrysler PT Cruiser MPV

Vehicle Body Color: Blue VIN: 3C4FY48B53T539494

Vehicle NHTSA No.: C30301 Month & Year of Manufacture: 8-02

Engine Data: 4 Cylinders; - CID; 2.4 Liters; - cc

Engine Placement: - Longitudinal; or X Lateral

Transmission: 5 Speed; X Manual; - Automatic; - Overdrive

Final Drive: - Rear Wheel Drive; X Front Wheel Drive; - Four Wheel Drive

Odometer Reading 16.1 km

Options: X A/C; X Power Steering; X Power Brakes; X Power Windows

DATA FROM TIRE PLACARD

Tire Pressure* (at capacity); 240 kPa FRONT
240 kPa REAR

Recommended Tire Size: P195/65R15 89T

Tires on Test Vehicle: P195/65R15 89T ; Manufacturer: Goodyear

Vehicle Capacity Data:

Number of Occupants: 2 Front; 3 Rear; - 3rd Seat; 5 Total

Type of Front Seat: X Bucket; - Bench; - Split Bench

Type of Rear Seat: - Bucket; X Bench; - Contoured

Type of Front Seat Back: - Fixed; X Adjustable with X Lever or - Knob

Type of Rear Seat Back: X Fixed; - Adjustable with - Lever or - Knob

Vehicle Max Capacity Loading = 392.0 kg (A)

No. of Occupants x 68.04 kg. = 340.2 kg (B)

Vehicle Cargo Capacity = 51.8 kg (A-B)

TEST VEHICLE DELIVERED WEIGHT WITH MAXIMUM FLUIDS:

Left Front =	<u>407.5</u> kg	Left Rear =	<u>286.0</u> kg
Right Front =	<u>416.0</u> kg	Right Rear =	<u>295.0</u> kg
TOTAL FRONT =	<u>823.5</u> kg	TOTAL REAR =	<u>581.0</u> kg
% of Total Weight =	<u>58.6</u> %	% of Total Weight =	<u>41.4</u> %
TOTAL WEIGHT =	<u>1404.5</u> kg		

* Tire pressure used in test.

DATA SHEET 1 (continued)

GENERAL TEST VEHICLE PARAMETER DATA

Vehicle: 2003 Chrysler PT Cruiser MPV

NHTSA No. C30301

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Test Vehicle Delivered Weight with Max. Fluids	=	<u>1404.5</u>	kg (A)
Maximum Cargo Carrying Capacity of Test Vehicle	=	<u>51.8</u>	kg (B)
Weight of instrumented Side Impact Dummies (2 X 81.2 kg)	=	<u>162.4</u>	kg (C)
TEST VEHICLE TARGET WEIGHT:	=	<u>1618.7</u>	kg (A+B+C)

FULLY LOADED TEST VEHICLE (UDVW + 1 or 2 SID(s) + CARGO):

Left Front	=	<u>463.5</u>	kg	Left Rear	=	<u>385.0</u>	kg
Right Front	=	<u>414.0</u>	kg	Right Rear	=	<u>368.5</u>	kg
TOTAL FRONT	=	<u>877.5</u>	kg	TOTAL REAR	=	<u>753.5</u>	kg
% of Total Weight	=	<u>53.8%</u>	%	% of Total Weight	=	<u>46.2%</u>	%
TOTAL TEST WEIGHT =		<u>1631.0</u>	kg				

AS TESTED WEIGHT OF TEST VEHICLE (1 OR 2 SID(s) + CARGO + EQUIPMENT & INSTRUMENTATION):

Left Front	=	<u>447.5</u>	kg	Left Rear	=	<u>376.0</u>	kg
Right Front	=	<u>420.5</u>	kg	Right Rear	=	<u>367.5</u>	kg
TOTAL FRONT	=	<u>868.0</u>	kg	TOTAL REAR	=	<u>743.5</u>	kg
% of Total Weight	=	<u>53.9%</u>	%	% of Total Weight	=	<u>46.1%</u>	%
TOTAL TEST WEIGHT =		<u>1611.5</u>	kg				

TEST VEHICLE ATTITUDE (all dimensions in millimeters):

AS DELIVERED:

Left Front	<u>711</u>	Right Front	<u>707</u>	Left Rear	<u>731</u>	Right Rear	<u>729</u>
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FULLY LOADED:

Left Front	<u>698</u>	Right Front	<u>702</u>	Left Rear	<u>686</u>	Right Rear	<u>699</u>
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READY FOR TEST:

Left Front	<u>701</u>	Right Front	<u>704</u>	Left Rear	<u>693</u>	Right Rear	<u>699</u>
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Test Vehicle Wheelbase: 2608 millimeters

C.G. = 1203.26 millimeters rearward of front wheel centerline

TOTAL VEHICLE LENGTH:

Right Side =	<u>4135</u>	millimeters
Left Side =	<u>4136</u>	millimeters
Centerline =	<u>4920</u>	millimeters

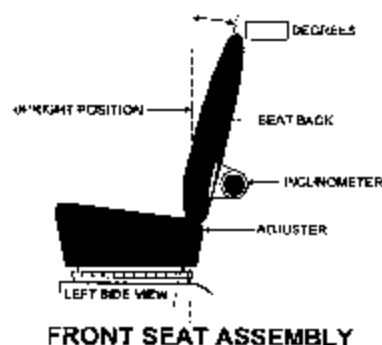
DATA SHEET 1 (continued)

GENERAL TEST VEHICLE PARAMETER DATA

Vehicle: 2003 Chrysler PT Cruiser MPV

NHTSA No. C30301

Nominal Design Riding Position for adjustable driver and passenger seat backs. Please describe how to position the inclinometer to measure the seat back angle. Include description of the location of the adjustment latch detent, if applicable.



FRONT SEAT CUSHION PLACEMENT: The seat was position in detent 10, where the forward-most detent is 0.

Total Length of Adjustment Travel: 228 millimeters

Total Number of Adjustment Positions or Detents: 20

FRONT SEAT BACK ADJUSTMENT POSITION: The lower seat back frame was positioned at 111.5 degrees from the sill. (21.5 degrees back from vertical with the sill level).

Seat Back Torso Angle: 21.5 degrees

SECOND POSITION SEAT:

Total Length of Fore/Aft Adjustment Travel: 0 millimeters

Seat Back Adjustment Position: Fixed

ADJUSTABLE STEERING COLUMN POSITION: Mid-travel position

WINDOW POSITIONS: Left Front: Closed Left Rear: Closed

Right Front: Removed Right Rear: Removed

Note: Windows will be in closed position on struck side of test vehicle and in open position on opposite side.

AMOUNT OF STODDARD SOLVENT IN FUEL TANK:

56.8 liters (Fuel Tank Usable Capacity)

52.6 liters used for test (92%-94% of Fuel Tank Usable Capacity)

LOCATION OF IMPACT POINT ON TEST VEHICLE SIDE TO BE IMPACTED:

Wheelbase = 2608 millimeters

Impact Point is 364 millimeters rearward of front axle centerline

(which is 940 millimeters forward of the wheelbase midpoint)

Actual Impact Point is 370 millimeters rearward of front axle centerline

DATA SHEET 2

TEST VEHICLE SUMMARY OF RESULTS

VEHICLE IDENTIFICATION:

Vehicle Year/Make/Model: 2003 Chrysler PT Cruiser

Body Style: MPV

VIN: 3C4FY48B53T539494

NHTSA No.: C30301

Test Date: February 20, 2003

Overall Length = 4290 millimeters; Overall Width = 1709 millimeters

VEHICLE TEST WEIGHT (Pre-Test):

Left Front = 447.5 kg Left Rear = 376.0 kg

Right Front = 420.5 kg Right Rear = 367.5 kg

TOTAL FRONT = 868.0 kg TOTAL REAR = 743.5 kg

TOTAL VEHICLE WEIGHT 1611.5 kg

Wheelbase = 2608 millimeters

Longitudinal C.G. from Center of Front Axle = 1203.26 millimeters

Impact Angle with Respect to Impactor = 90 degrees

ACTUAL IMPACT POINT

Actual Impact Point is 6 mm rearward of nominal impact ref. line (Lateral)

Actual Impact Point is 8 mm below nominal impact point (Vertical)

MAXIMUM EXTERIOR STATIC CRUSH:

1. LEVEL 1 (226 mm above ground) = 62 millimeters

2. LEVEL 2 (576 mm above ground) = 183 millimeters

3. LEVEL 3 (634 mm above ground) = 186 millimeters

4. LEVEL 4 (903 mm above ground) = 172 millimeters

5. LEVEL 5 (1468 mm above ground) = 8 millimeters

Maximum Post-Test Intrusion = 186 millimeters

OCCUPANTS:

Front Passenger:

Rear Passenger:

Dummy Identification 015

016

Restraints Used 3-Point Active Seat Belt

3-Point Active Seat Belt

INSTRUMENTATION:

Number of Vehicle Data Channels: = 21

Number of Cameras: Onboard = 3

Offboard = 7

TOTAL = 10

DATA SHEET 3

MOVING DEFORMABLE BARRIER (MDB) SUMMARY

Vehicle: 2003 Chrysler PT Cruiser MPV

NHTSA No. C30301

MDB FACE MANUFACTURER AND SERIAL NUMBER:

Plascore: 036R1202-3; 005C1002

POSITION OF IMPACT (MDB) ON MONORAIL:

Crabbed 27° to left

MDB DETAILS:

Overall Width of Framework Carriage	=	<u>1250</u>	millimeters
Overall Length of MDB (incl. honeycomb impact face)	=	<u>4120</u>	millimeters
Wheelbase of Framework Carriage	=	<u>2590</u>	millimeters
Tread of Framework Carriage (Front & Rear)	=	<u>1875</u>	millimeters
C.G. Location Rearward of Front Axle	=	<u>1104</u>	millimeters

MDB WEIGHT:

Left Front	=	<u>409.5</u>	kg	Left Rear	=	<u>281.5</u>	kg
Right Front	=	<u>372.5</u>	kg	Right Rear	=	<u>299.0</u>	kg
TOTAL FRONT =		<u>782.0</u>	kg	TOTAL REAR =		<u>580.5</u>	kg
TOTAL MDB WEIGHT =		<u>1362.5</u>	kg				
Impact Angle (MDB C/L to Target Vehicle C/L)	=	<u>90</u>	degrees				
Impact Speed	=	<u>53.27</u>	kph				

MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE:

1. Row A at Center of Bumper Level	=	<u>143</u>	millimeters
2. Row B at Top of Bumper Level	=	<u>111</u>	millimeters
3. Row C at Mid Level	=	<u>146</u>	millimeters
4. Row D at Top of Stack Level	=	<u>148</u>	millimeters

INSTRUMENTATION:

Number of MDB Data Channels	=	<u>5</u>
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DATA SHEET 4

POST-TEST OBSERVATIONS

Vehicle: 2003 Chrysler PT Cruiser MPV

NHTSA No. C30301

VISIBLE DUMMY CONTACT POINTS:

LEFT FRONT SID

Head: Top of head to driver side window
 Upper Torso: Left arm to rear section of door trim above arm rest
 Lower Torso: Left side of pelvis to lower rear section of door trim below arm rest
 Left Knee: Left knee to forward section of door trim
 Right Knee: Right knee to left knee

LEFT REAR SID

Left side of head to upper C-pillar trim
Left arm to rear section of door trim above arm rest
Left side of pelvis to lower rear section of door trim below arm rest
Left knee to forward section of door trim
Right knee to left knee

DOOR OPENING:

LEFT DOOR

Front: Closed / Unlatched / Inoperable
 Rear: Closed / Latched / Inoperable

RIGHT DOOR

Closed / Latched / Operable
Closed / Latched / Operable

MDB DISTANCE FROM TARGET IMPACT POINT:

Vertical: 8 mm below target
Horizontal: 6 mm rearward of target

ARM REST LOCATIONS:

Front: 220 mm below window opening
 Rear: 240 mm below window opening

SEAT MOVEMENT:

Front: None
 Rear: None

GLAZING DAMAGE:

Windshield: None
 Window: Left rear door window shattered during the impact event

PILLAR PERFORMANCE:

No visible tears or separations

SILL SEPARATION:

None

AIR BAG DEPLOYMENT STATUS:

	DRIVER	FRONT PASSENGER	REAR PASSENGER
FRONT	No	No	-
SIDE	-	-	-

OTHER NOTABLE IMPACT EFFECTS:

The driver side door unlatched from the striker during the impact event. The door remained closed due to sheet metal deformation. Door closure was documented and verified on real time film prior to the impact.

SECTION 4

OCCUPANT AND VEHICLE INFORMATION

DATA SHEET 5
SID INSTRUMENTATION DATA

Vehicle: 2003 Chrysler PT Cruiser MPV

NHTSA No. C30301

		Front Dummy ID# 015				Rear Dummy ID# 016			
		Pos. Direction		Neg. Direction		Pos. Direction		Neg. Direction	
		Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
HEAD ACCELERATIONS									
Longitudinal	X	4.4	74.1	-20.8	86.6	12.3	59.0	-10.2	97.2
Lateral	Y	30.9	58.7	-4.9	173.6	125.1	55.6	-21.2	71.0
Vertical	Z	39.3	70.4	-2.8	54.6	26.3	56.7	-37.0	67.7
Resultant	R	40.2	71.0	-	-	126.6	55.7	-	-
HIC		126.8				498.2			
UPPER RIB ACCELERATIONS									
Upper Rib Lateral	Y	57.0	41.2	-11.2	57.5	41.9	55.7	-4.8	110.0
Upper Rib Lateral	Y(R)	58.0	40.7	-11.4	57.5	41.9	55.6	-5.6	110.0
Lower Rib Lateral	Y	68.5	40.6	-7.0	98.7	44.1	54.3	-4.7	109.4
Lower Rib Lateral	Y(R)	68.8	40.6	-7.1	98.7	44.4	54.3	-4.2	109.4
LOWER RIB ACCELERATIONS									
Lower Lateral	Y	54.3	44.4	-5.9	90.0	51.9	51.2	-6.9	75.6
Lower Lateral	Y(R)	54.3	44.4	-6.1	90.0	51.0	51.2	-6.6	75.6
PELVIS ACCELERATIONS									
Lateral	Y	39.2	47.5	-4.4	155.7	62.8	45.0	-4.0	59.4
Lateral	Y(R)	39.9	46.9	-4.5	155.7	61.4	45.0	-3.8	59.4

REFERENCE: Positive Direction –
 Longitudinal (X) = forward
 Lateral (Y) = to right
 Vertical (Z) = down

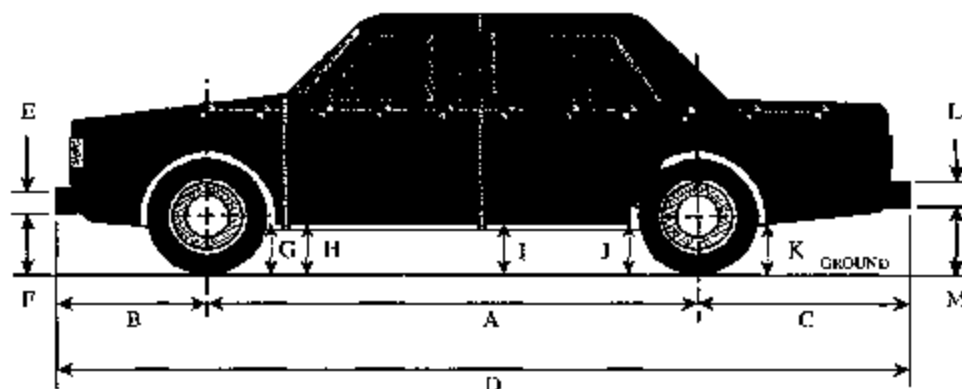
Note: Above data has been FIR filtered, Y(R) denotes redundant Y direction accelerometer.
 Head Accelerations are filtered at SAE Class 1000.

DATA SHEET 6

VEHICLE SIDE MEASUREMENTS

Vehicle: 2003 Chrysler PT Cruiser MPV

NHTSA No. C30301



LEFT SIDE VIEW

NOTE: all dimensions are in millimeters with tolerance of ± 3 mm

	PRE-TEST (as delivered)	PRE-TEST (as tested)	POST-TEST (as tested)	Δ CHANGE
A	2614	2608	2605	-3
B	838	838	840	2
C	838	844	838	-6
D	4290	-	4283	-7
E	162	-	161	-1
F	376	375	373	-2
G	160	142	147	5
H	199	180	186	6
I	221	186	200	14
J1	199	161	167	6
J2	230	191	201	10
K	274	221	237	16
L	273	-	280	7
M	320	263	277	14
N	751	-	702	-49
O	735	-	721	-14
P	1113	-	1066	-47
Q	446	-	434	-12
R	4135	-	4131	-4
S	4136	-	4123	-13
T	1709	-	1661	-48

D = Length at Centerline

E&L = Bumper Thickness

R = Right Side Length

S = Left Side Length

T = Width at B-Pillar

J1 = To Pinch Weld

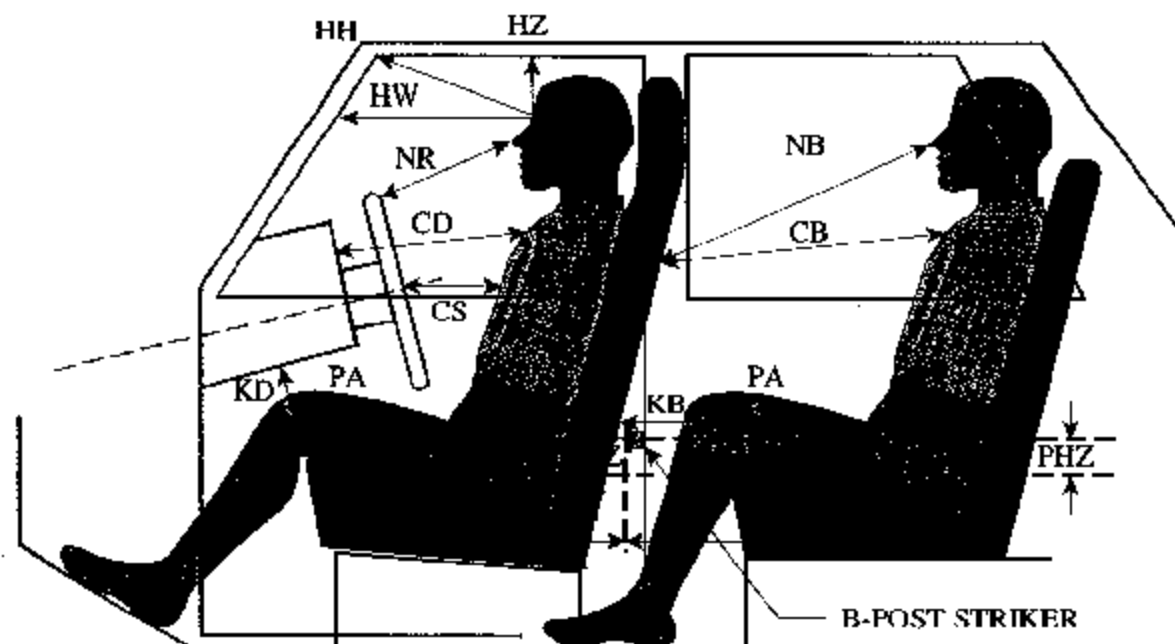
J2 = To Sill

DATA SHEET 7

SID LONGITUDINAL CLEARANCE DIMENSIONS

Vehicle: 2003 Chrysler PT Cruiser MPV

NHTSA No. C30301



LEFT SIDE VIEW

NOTE: 2-DOOR VEHICLE SHOWN.
REAR DUMMY PHX & PHZ
MEASUREMENTS FOR A 4-DOOR
VEHICLE WOULD USE THE C-POST
STRIKER AS A REFERENCE POINT

NOTE: All dimensions are in millimeters with tolerance of ± 3 mm

	DRIVER ID# 015	LEFT REAR PASS. ID# 016
HH	459	N/A
HW	626	N/A
HZ	165	123
NR/NB	451	602
CD/CB	595	528
CS	274	N/A
KDL(KDA°)/KBL(KDA°)	224 / (22 °)	196 / (18 °)
KDR(KBA°)/KBR(KBA°)	200 / (22 °)	194 / (18 °)
PA°	24.0 °	23.0 °
PHX	176	234
PHZ	104	192

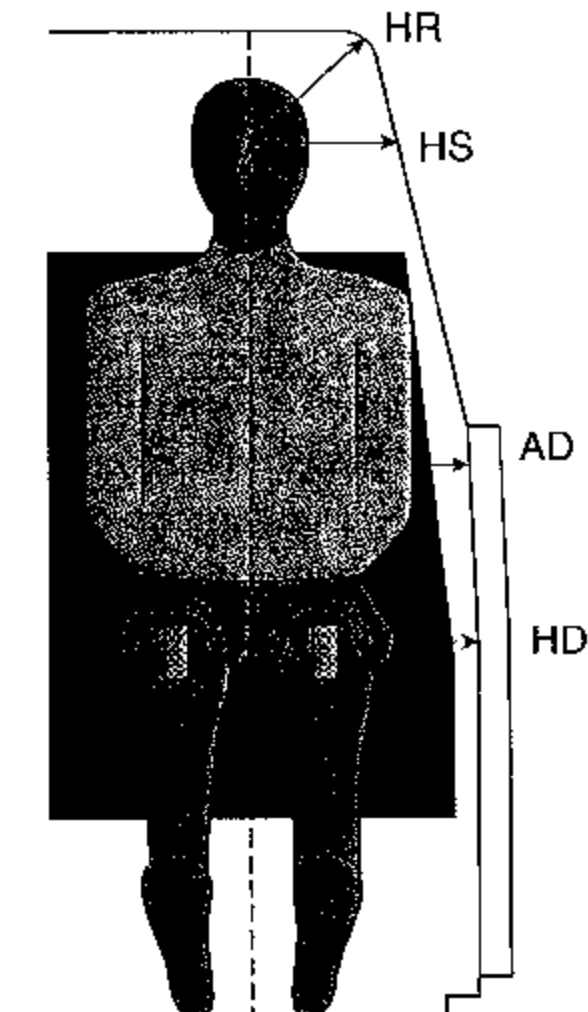
Note: 2-door vehicle shown. Rear dummy PHX & PHZ measurements for 4-door vehicle would use the C-post striker as a reference point.

DATA SHEET 8

SID LATERAL CLEARANCE DIMENSIONS

Vehicle: 2003 Chrysler PT Cruiser MPV

NIITSA No. C30301



NOTE: All dimensions are in millimeters with tolerance of ± 3 mm

	DRIVER ID # 015		LEFT REAR PASS. ID # 016	
HR	178		178	
HS	323		313 (to side window)	
AD*	LOWER: 115	UPPER: 118	LOWER: 110	UPPER: 110
HD	197		180	

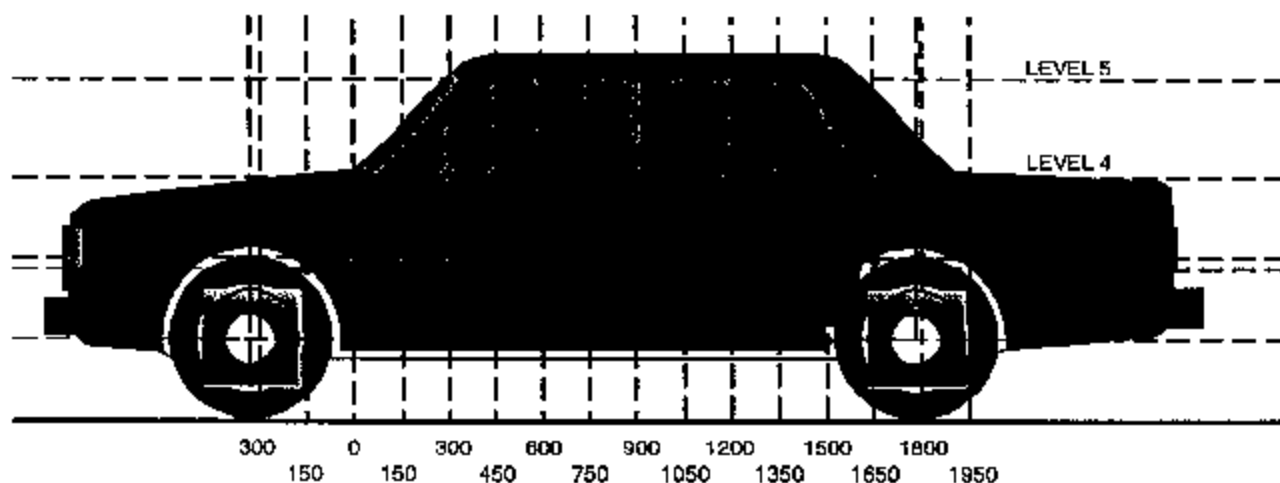
* Lower measurement is taken laterally at the center of the lower rib accelerometer height from the SID arm to the closest part of the vehicle side. Upper measurement is taken laterally at the center of the upper rib accelerometer height from the SID arm to the closest part of the vehicle side.

DATA SHEET 9

VEHICLE SIDE MEASUREMENTS

Vehicle: 2003 Chrysler PT Cruiser MPV

NHTSA No. C30301



LEFT SIDE VIEW

NOTE: All measurements are in millimeters (mm)

- LEVEL 5 - WINDOW TOP
- LEVEL 4 - WINDOW SILL
- LEVEL 3 - MID-DOOR
- LEVEL 2 - OCCUPANT H-POINT
- LEVEL 1 - SILL TOP HEIGHT

MEASUREMENTS ARE TAKEN WHEN THE VEHICLE IS IN THE "AS TESTED" CONFIGURATION.
Measurements Along the Vertical 750 mm Line Shown Above:

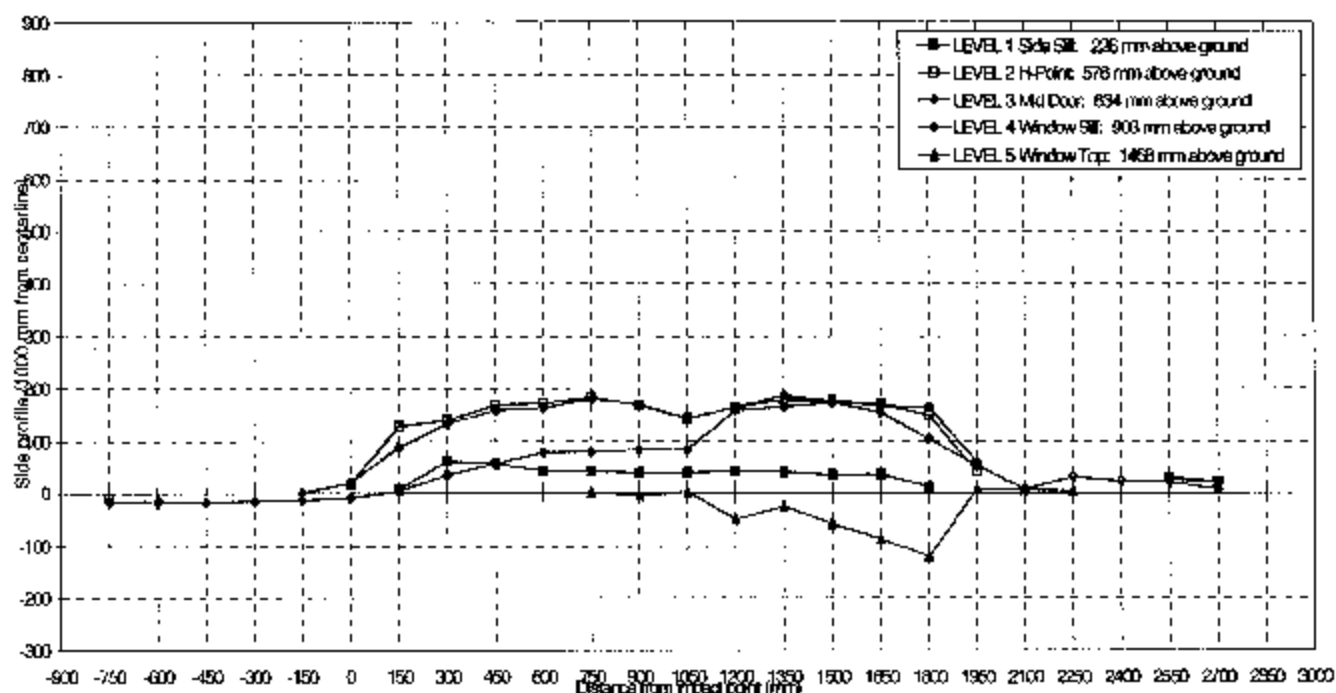
Level 5 @ Window Top	=	<u>1468</u>	millimeters
Level 4 @ Window Sill	=	<u>903</u>	millimeters
Level 3 @ Mid Door	=	<u>634</u>	millimeters
Level 2 @ Occupant H-Point	=	<u>576</u>	millimeters
Level 1 @ Sill Top Height	=	<u>226</u>	millimeters

DATA SHEET 10

VEHICLE EXTERIOR CRUSH PROFILES - ALL LEVELS

Vehicle: 2003 Chrysler PT Cruiser MPV

NHTSA No. C30301



NOTE: All dimensions are in millimeters with a tolerance of ± 3 mm

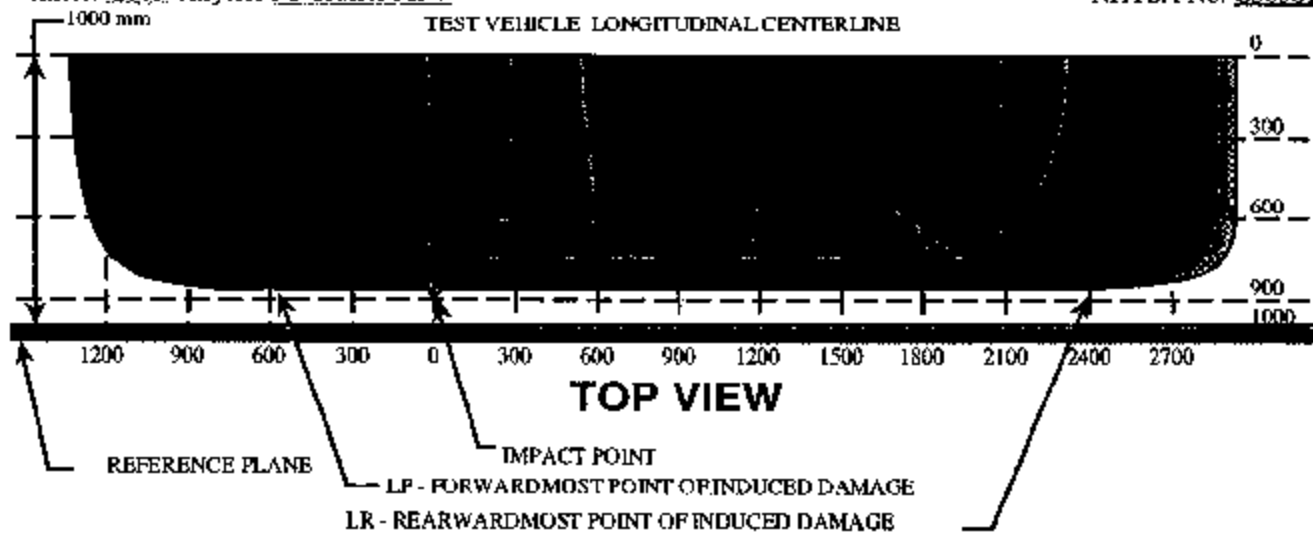
		DISTANCE IN MILLIMETERS (mm) FROM IMPACT POINT																												
LEVEL	HEIGHT (mm)		-900	-750	-600	-450	-300	-150	150	300	450	600	750	900	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700	2850	3000		
LEVEL 1 SIDE SILL	226	PRE	-	-	-	-	-	-	182	187	182	181	181	180	181	182	184	189	189	198	-	-	-	-	-	-	-	-		
		POST	-	-	-	-	-	-	188	249	239	224	223	219	220	225	225	224	224	210	-	-	-	-	-	-	-			
		CRUSH	N/A	N/A	N/A	N/A	N/A	N/A	7	62	57	43	42	39	39	43	41	35	36	12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
LEVEL 2 H POINT	576	PRE	-	188	-	-	-	-	143	157	177	171	168	164	163	165	167	168	175	155	141	-	-	-	149	174	-	-		
		POST	-	188	-	-	-	-	271	298	344	342	351	331	305	327	345	344	344	303	183	-	-	-	179	195	-	-		
		CRUSH	N/A	-10	N/A	N/A	N/A	N/A	128	139	167	171	183	167	142	162	175	176	169	148	42	N/A	N/A	N/A	30	21	N/A	N/A		
LEVEL 3 MID DOOR	634	PRE	-	238	162	-	-	140	147	167	175	168	164	158	158	159	165	167	167	158	136	-	-	-	153	178	-	-		
		POST	-	220	147	-	-	140	228	299	333	330	340	306	300	322	351	342	332	322	195	-	-	-	179	199	-	-		
		CRUSH	N/A	-19	-13	N/A	N/A	0	89	132	138	142	179	168	142	163	186	175	165	164	60	N/A	N/A	N/A	26	21	N/A	N/A		
LEVEL 4 WINDOW SILL	903	PRE	-	-	504	407	341	294	229	215	205	198	191	186	185	182	184	187	188	195	189	213	221	242	265	312	-	-		
		POST	-	-	495	399	328	280	232	250	282	278	271	270	268	339	348	358	342	300	222	220	252	255	285	319	-	-		
		CRUSH	N/A	N/A	-19	-18	-15	-14	3	35	57	79	80	84	84	157	164	172	153	105	33	7	31	23	20	7	N/A	N/A		
LEVEL 5 WINDOW TOP	1468	PRE	-	-	-	-	-	-	-	-	-	-	708	525	459	422	416	415	412	415	415	419	447	-	-	-	-			
		POST	-	-	-	-	-	-	-	-	-	-	-	710	520	461	373	361	358	326	296	423	425	451	-	-	-			
		CRUSH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	5	2	-49	-25	-57	-85	-119	8	6	4	N/A	N/A	N/A	N/A	N/A	

DATA SHEET 11

VEHICLE DAMAGE PROFILE DISTANCES

Vehicle: 2003 Chrysler PT Cruiser MPV

NHTSA No. C30301



MEASUREMENT CONVENTIONS:

Forward of the impact point (towards front of vehicle) is considered negative (---).

Rearward of the impact point (toward rear end of vehicle) is considered positive (+).

NOTE: All dimensions are in millimeters with tolerance of ± 3 mm.

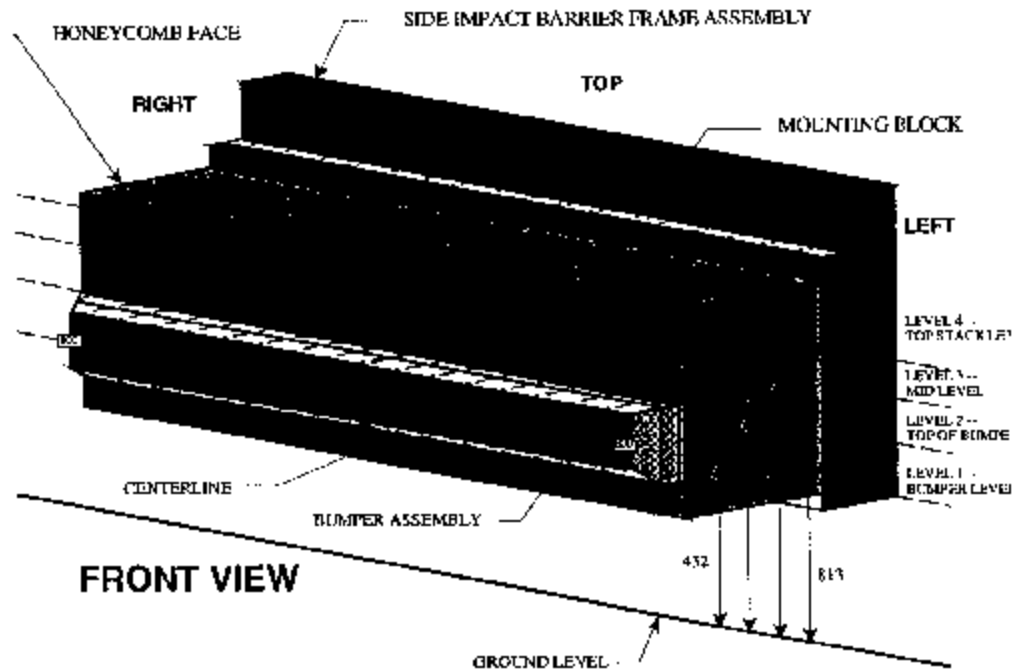
DPD MEASUREMENTS		POST TEST (mm)	PRETEST (mm)	STATIC CRUSH (mm)
1	(LR = 2700 mm)	195	174	21
2	2132	227	215	12
3	1564	344	171	173
4	996	314	163	151
5	428	337	174	163
6	(LF = -140 mm)	141	140	1

DATA SHEET 12

EXTERIOR STATIC CRUSH FOR IMPACTOR FACE

Vehicle: 2003 Chrysler PT Cruiser MPV

NHTSA No. C30301



NOTE: Dimensions are shown in millimeters, mm

NOTE: All dimensions are in millimeters with a tolerance of ± 3 mm

LEVEL	HEIGHT AT CL. (mm)		DISTANCE RIGHT OF CENTER (mm)								DISTANCE LEFT OF CENTER (mm)							
			800	700	600	500	400	300	200	100	100	200	300	400	500	600	700	800
LEVEL 4 TOP STACK	813	PRE	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619
		POST	635	613	605	612	623	648	647	637	648	656	662	670	684	695	720	767
		CRUSH	17	-6	-14	-7	4	29	28	18	29	37	43	53	65	76	101	148
LEVEL 3 MID LEVEL	686	PRE	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619
		POST	653	627	619	625	655	653	656	641	635	640	647	652	660	669	711	765
		CRUSH	34	8	0	6	36	34	37	22	16	21	28	33	41	50	92	146
LEVEL 2 TOP BUMPER	533	PRE	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619
		POST	690	681	681	683	686	690	689	683	671	673	678	684	688	688	712	730
		CRUSH	71	62	52	64	67	71	70	64	52	54	59	65	69	69	93	111
LEVEL 1 MID BUMPER	432	PRE	535	519	518	518	518	518	518	518	518	518	518	518	518	518	519	535
		POST	637	623	623	627	631	634	630	630	625	623	628	632	641	646	662	672
		CRUSH	102	104	104	109	113	116	112	112	107	105	110	114	123	128	143	137

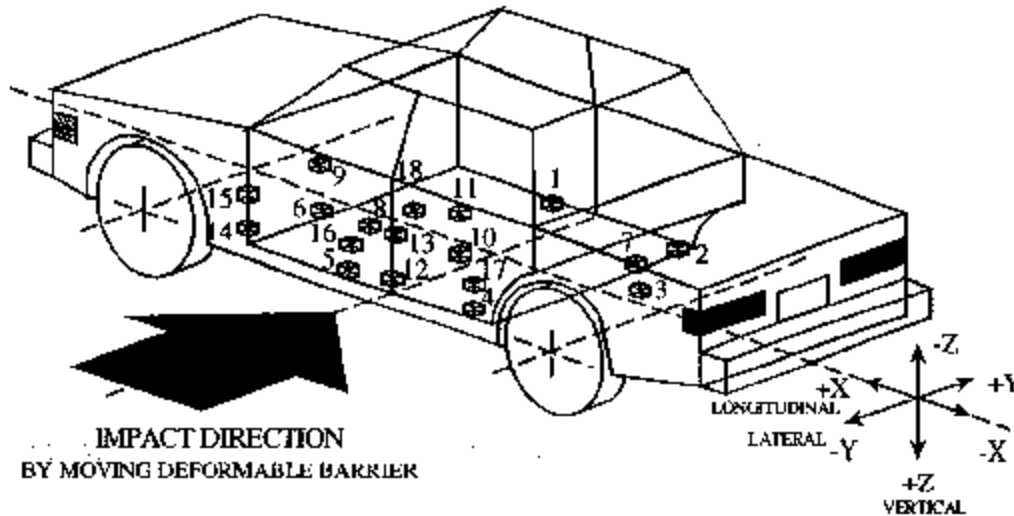
*Heights measured above ground level.

DATA SHEET 13

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2003 Chrysler PT Cruiser MPV

NHTSA No. C30301



- 1-Right Side Sill @ Front Seat
- 2-Right Side Sill @ Rear Seat
- 3-Rear Floorpan Above Axle
- 4-Left Side Sill @ Rear Seat
- 5-Left Side Sill @ Front Seat
- 6-Left Front Door on Centerline
- 7-Right Rear Occupant Compartment
- 8-Midrear of Left Front Door
- 9-Left Front Door Upper Centerline

- 10-Midrear of Left Rear Door
- 11-Left Rear Door Upper Centerline
- 12-Left Lower B-Pillar
- 13-Left Middle B-Pillar
- 14-Left Lower A-Pillar
- 15-Left Middle A-Pillar
- 16-Front Seat Track
- 17-Rear Seat Track
- 18-Vehicle CG

DATA SHEET 13 (continued)

VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2003 Chrysler PT Cruiser MPV

NHTSA No. C30301

Accel. No.	Location	Coordinates (mm)±3 mm			Long. (x)		Lat. (y)		Vert. (z)		Resultant	
		X*	Y*	Z*	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
1†	Right Side Sill at Front Seat	2564	629	-218	pos. †	-	21.2	9.4	4.9	46.3	†	-
					neg. †	-	-2.7	65.5	-7.0	13.3	-	-
2	Right Side Sill at Rear Seat	1772	569	-185	pos. 3.9	28.6	25.1	10.9	8.1	32.1	25.6	11.3
					neg. -5.4	16.1	-2.4	102.5	-8.4	26.4	-	-
3	Rear Floorpan Above Axle	910	39	-454	pos. 2.3	53.9	24.0	11.0	46.5	20.1	47.3	20.1
					neg. -13.1	17.4	-2.9	101.7	-6.8	11.8	-	-
4	Left Side Sill at Rear Seat	1691	-704	-270	pos. -	-	49.3	5.1	-	-	-	-
					neg. -	-	-10.5	18.8	-	-	-	-
5	Left Side Sill at Front Seat	2518	-668	-254	pos. -	-	91.5	5.2	-	-	-	-
					neg. -	-	-33.3	10.2	-	-	-	-
6**	Left Front Door on Centerline	-	-	-	pos. -	-	-	-	-	-	-	-
					neg. -	-	-	-	-	-	-	-
7	Right Rear Occupant Compartment	1727	353	-167	pos. -	-	25.2	11.6	-	-	-	-
					neg. -	-	-2.4	103.4	-	-	-	-
8**	Midrear of Left Front Door	-	-	-	pos. -	-	-	-	-	-	-	-
					neg. -	-	-	-	-	-	-	-
9**	Left Front Door Upper Centerline	-	-	-	pos. -	-	-	-	-	-	-	-
					neg. -	-	-	-	-	-	-	-
10**	Midrear of Left Rear Door	-	-	-	pos. -	-	-	-	-	-	-	-
					neg. -	-	-	-	-	-	-	-
11**	Left Rear Door Upper Centerline	-	-	-	pos. -	-	-	-	-	-	-	-
					neg. -	-	-	-	-	-	-	-

*Reference: X - Rear Bumper (+ Forward) Y - Vehicle Centerline (+ To Right) Z - Ground Level (+ Down)

**Accelerometer was not requested by COTR.

† Right Side Sill at Front Seat X accelerometer wire was cut at 93 ms.

DATA SHEET 13 (continued)

VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2003 Chrysler PT Cruiser MPV

NHTSA No. C30301

Accel. No.	Location	Coordinates (mm)±3 mm			Long. (x)		Lat. (y)		Vert. (z)		Resultant	
		X*	Y*	Z*	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)	Max (g)	Time (msec)
12	Left Lower B-Pillar	1911	-654	-452	pos.	-	102.0	7.5	-	-	-	-
					neg.	-	-79.3	16.4	-	-	-	-
13†	Left Middle B-Pillar	1890	-683	-816	pos.	-	†	-	-	-	-	-
					neg.	-	†	-	-	-	-	-
14	Left Lower A-Pillar	2945	-684	-457	pos.	-	95.6	4.6	-	-	-	-
					neg.	-	-25.3	11.4	-	-	-	-
15	Left Middle A-Pillar	2861	-647	-998	pos.	-	18.2	41.4	-	-	-	-
					neg.	-	-2.7	117.6	-	-	-	-
16	Front Seat Track	2046	-478	-353	pos.	-	75.8	8.2	-	-	-	-
					neg.	-	-7.4	14.2	-	-	-	-
17	Rear Seat Track	1056	-526	-527	pos.	-	44.9	20.7	-	-	-	-
					neg.	-	-3.3	124.6	-	-	-	-
18	Vehicle CG	2313	19	-353	pos.	29.7	62.2	11.8	23.4	15.8	62.9	11.8
					neg.	24.0	-42.8	17.1	-17.2	29.9	-	-

*Reference: X - Rear Bumper (+ Forward) Y - Vehicle Centerline (+ To Right) Z - Ground Level (+ Down)

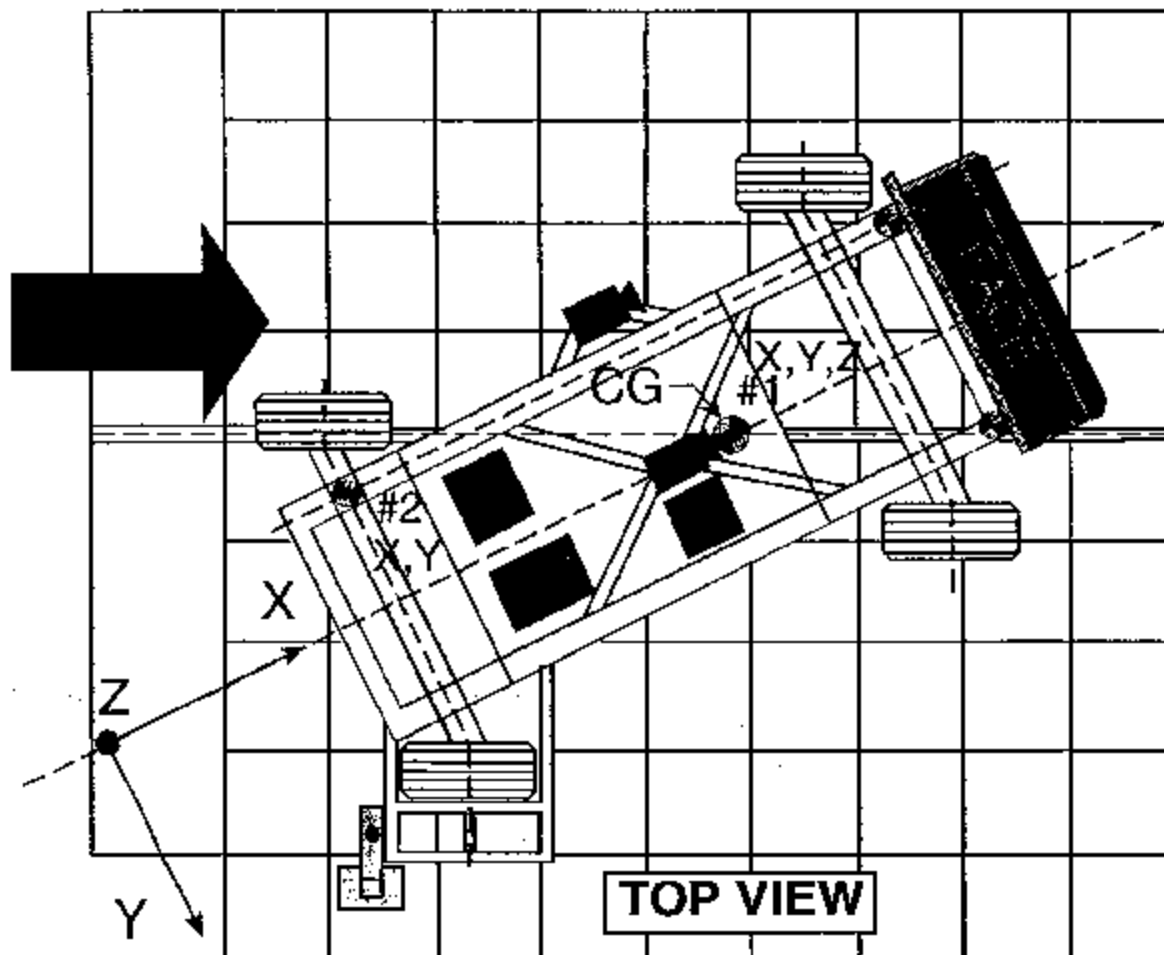
† Accelerometer was damaged, data not valid.

DATA SHEET 14

MDB ACCELEROMETER LOCATIONS AND DATA SUMMARY

Vehicle: 2003 Chrysler PT Cruiser MPV

NHTSA No. C30301



Accel. No.	Location	Coordinates (millimeters)			Pos. Direct.		Neg. Direct.	
		X*	Y*	Z*	Max (g)	Time (msec)	Max (g)	Time (msec)
1	MDB Center of Gravity							
	Longitudinal... X	1859	0	-330	1.1	92.7	-19.1	40.0
	Lateral..... Y				1.1	70.3	-9.5	14.7
	Vertical..... Z				11.8	51.9	-11.3	21.8
	Resultant..... R				20.3	39.5	-	-
2	Rear Frame Member							
	Longitudinal... X	386	-660	-660	1.8	159.6	-19.7	39.4
	Lateral..... Y				3.2	27.2	-2.1	55.2

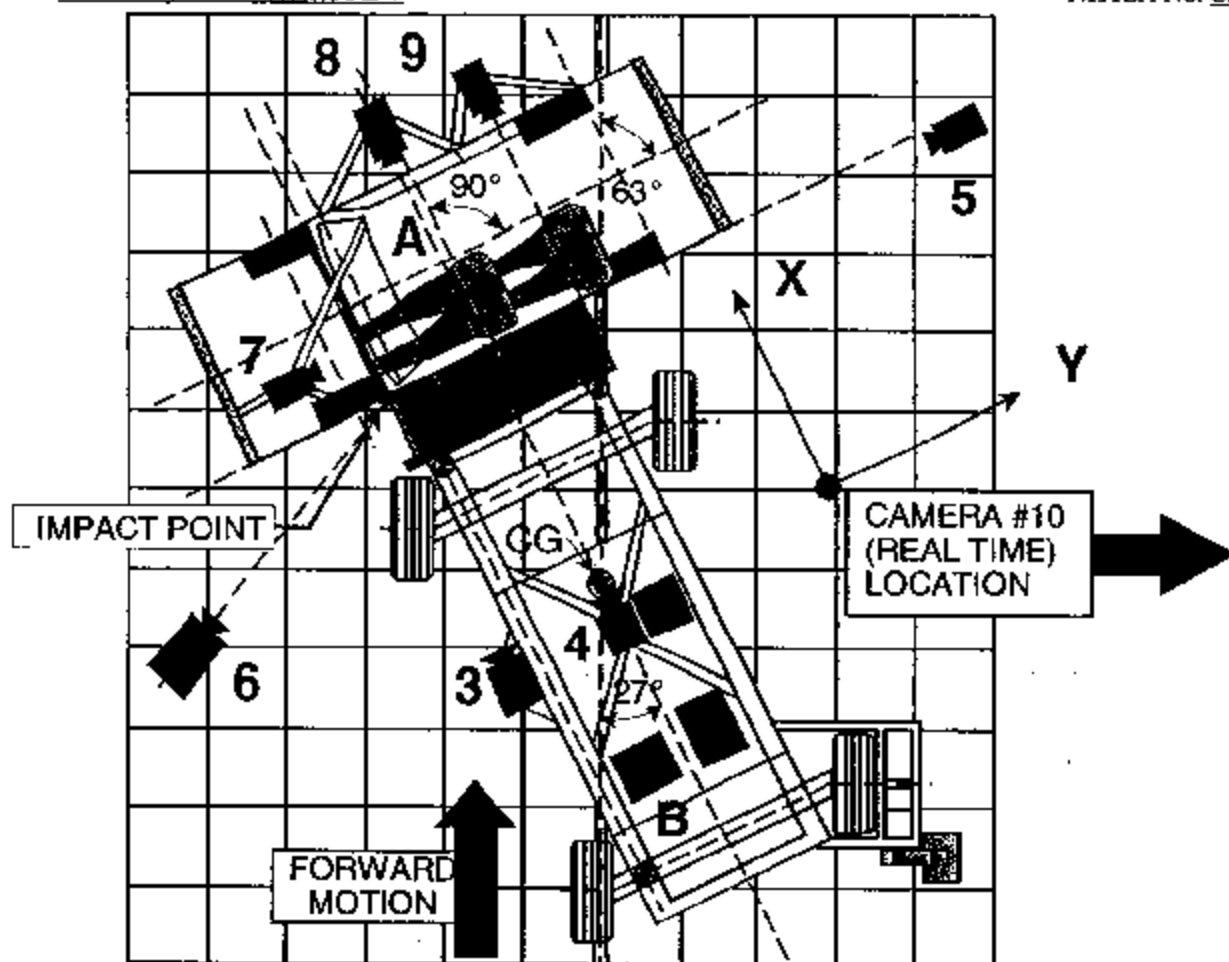
*Reference:
 X = Rear Bumper (+ Forward)
 Y = Vehicle Centerline (+ To Right)
 Z = Ground Level (+ Down)
 All measurements accurate to within ± 3 mm.

DATA SHEET 15

HIGH SPEED CAMERA LOCATIONS AND DATA SUMMARY

Vehicle: 2003 Chrysler PT Cruiser MPV

NHTSA No. C30301



Camera No.	View	Coordinates (millimeters)			Angle (deg.)	Lens (mm)	Film Speed (fps)
		X*	Y*	Z*			
1	Overhead view of test vehicle	89	815	-4880	-90	8	1015
2	Overhead closeup view of impact plane	219	873	-4880	-90	12.5	1020
3	MDB onboard closeup view of impact point	-1470	0	-847	0	13	1040
4	MDB onboard view of driver dummy	-1140	838	-1586	-17	7.5	1030
5	Right side ground level overall view	60	8960	-1084	-3	25	1025
6	Left side ground level overall view	-1556	-1895	-1078	-8	13	1005
7	Test vehicle onboard driver front view	501	-217	-1325	-13	13	1020
8	Test vehicle onboard driver side view	1740	865	-1062	-9	8	1020
9	Test vehicle onboard passenger side view	1733	1563	-1112	-8	8	1015
10	Real time film coverage of test	-	-	-	-	-	24

* Reference (from point of impact); all measurements accurate to within ± 6 mm.

X = (Impact Point) + Forward

Y = (Impact Point) + To Right

Z = (Ground Level) + Down

SECTION 5

FUEL SYSTEM INTEGRITY

DATA SHEET 16

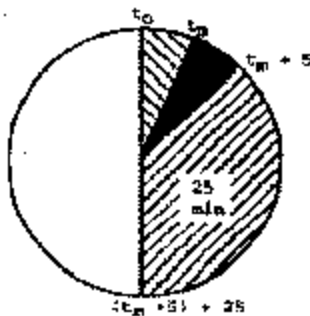
FMVSS 301 FUEL SYSTEM INTEGRITY DATA

NHTSA No.: C30301 TEST DATE: February 20, 2003
 Vehicle Mfr./Make/Model: DaimlerChrysler Corporation 2003 Chrysler PT Cruiser MPV

TEST VEHICLE IMPACT TYPE:

- Frontal (48.28 kph)
- Oblique (48.28 kph) with - ° barrier face first
 contacting the - side
 (driver/passenger)
- Rear Moving Barrier (48.28 kph)
- Lateral Moving Barrier (32.19 kph)
- X Side Impact Moving Deformable Barrier (53.27 kph)
 contacting the driver side side
 (driver/passenger)

FUEL SPILLAGE MEASUREMENT:



1. From impact until vehicle motion ceases
2. For five minute period after vehicle motion ceases
3. For next 25 minutes

ACTUAL	MAX ALLOWED
0 g	28 g
0 g	142 g
0 g	28 g/l min.

SOLVENT SPILLAGE DETAILS:

None

DATA SHEET 17

ROLLOVER DATA

Vehicle: 2003 Chrysler PT Cruiser MPV

NHTSA No.: C30301



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Stage	Rotation Time (spec. 1 -3 min)				FMVSS 301 Hold Time		Total Time				Next Whole Minute Interval	
0° - 90°	1	minutes	12	seconds	5	minutes	6	minutes	12	seconds	7	minutes
90° - 180°	1	minutes	3	seconds	5	minutes	6	minutes	3	seconds	7	minutes
180°-270°	1	minutes	2	seconds	5	minutes	6	minutes	2	seconds	7	minutes
270°-360°	1	minutes	18	seconds	5	minutes	6	minutes	18	seconds	7	minutes

II. FMVSS 301 REQUIREMENTS: (Maximum allowable solvent spillage):

First 5 minutes from onset of rotation	6th min.	7th min.	8th min. (if required)
142 g	28 g	28 g	28 g

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

Rollover Stage	First 5 minutes from onset of rotation (g)	6th min. (g)	7th min. (g)	8th min. (if required) (g)
0° - 90°	0	0	0	N/A
90° - 180°	0	0	0	N/A
180°-270°	0	0	0	N/A
270°-360°	0	0	0	N/A

Note: Record spillage for whole minute intervals only as determined above.

IV. SOLVENT SPILLAGE LOCATION(S):

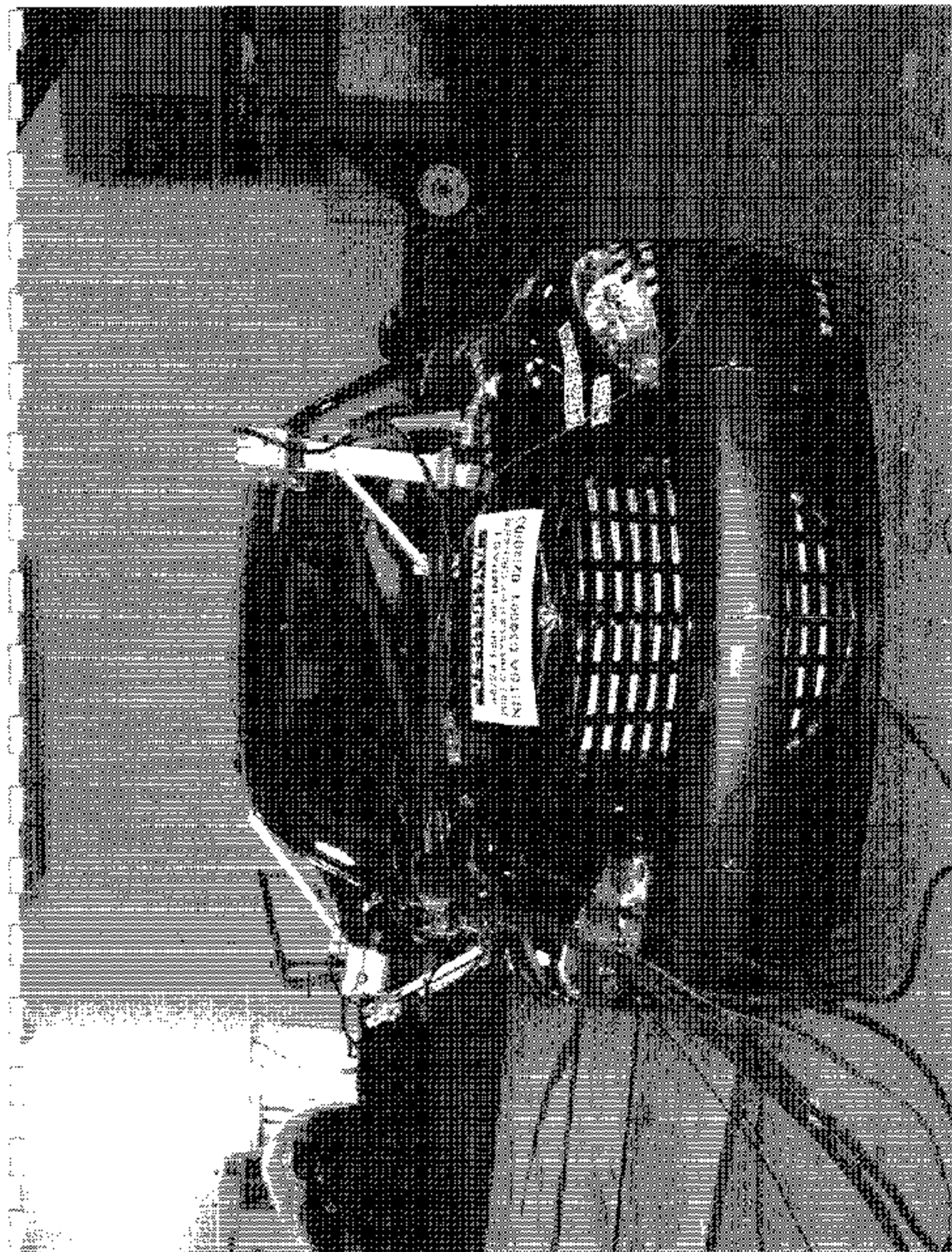
Rollover Stage	Spillage Location
0° - 90°	None
90° - 180°	None
180°-270°	None
270°-360°	None

APPENDIX A

PHOTOGRAPHS

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Figure A- 37	ROLLOVER 270 DEGREES	A- 39
Figure A- 38	ROLLOVER 360 DEGREES	A- 40



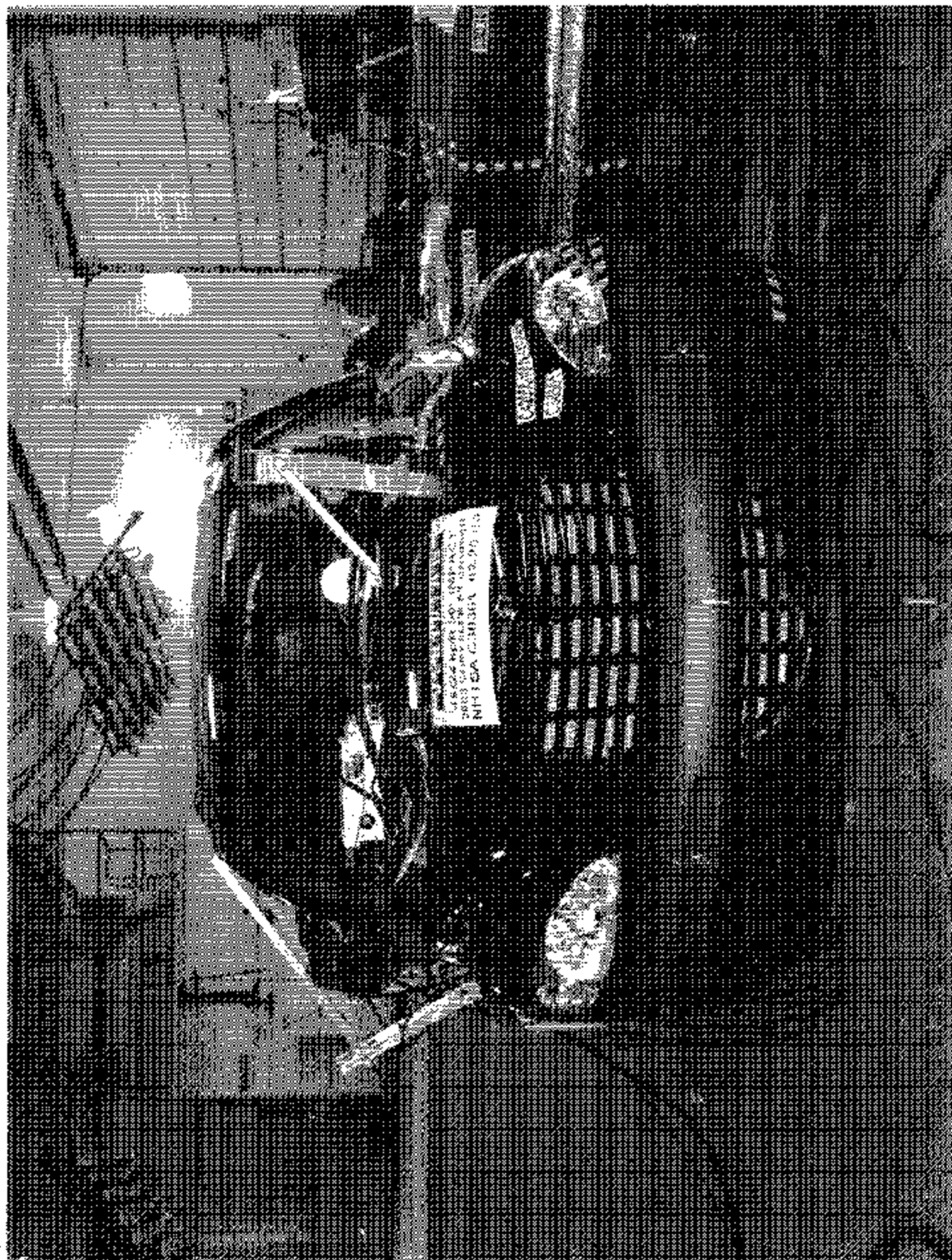




Figure A.3 PRE-TEST REAR VIEW OF TEST VEHICLE



Figure A-4 POST-TEST REAR VIEW OF TEST VEHICLE

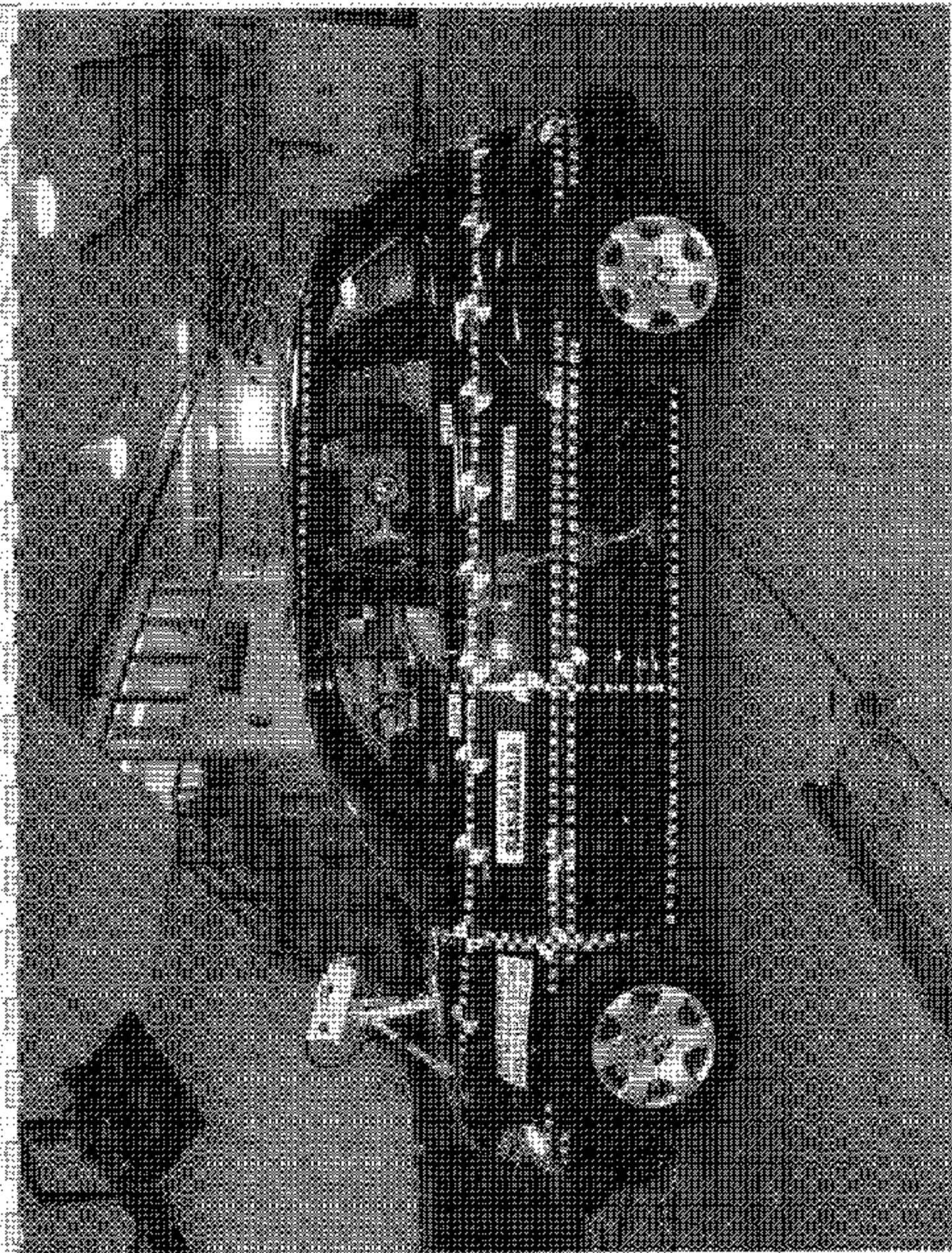


Figure A-5 PRE-TLSI IMPACTED SIDE VIEW OF TEST VEHICLE

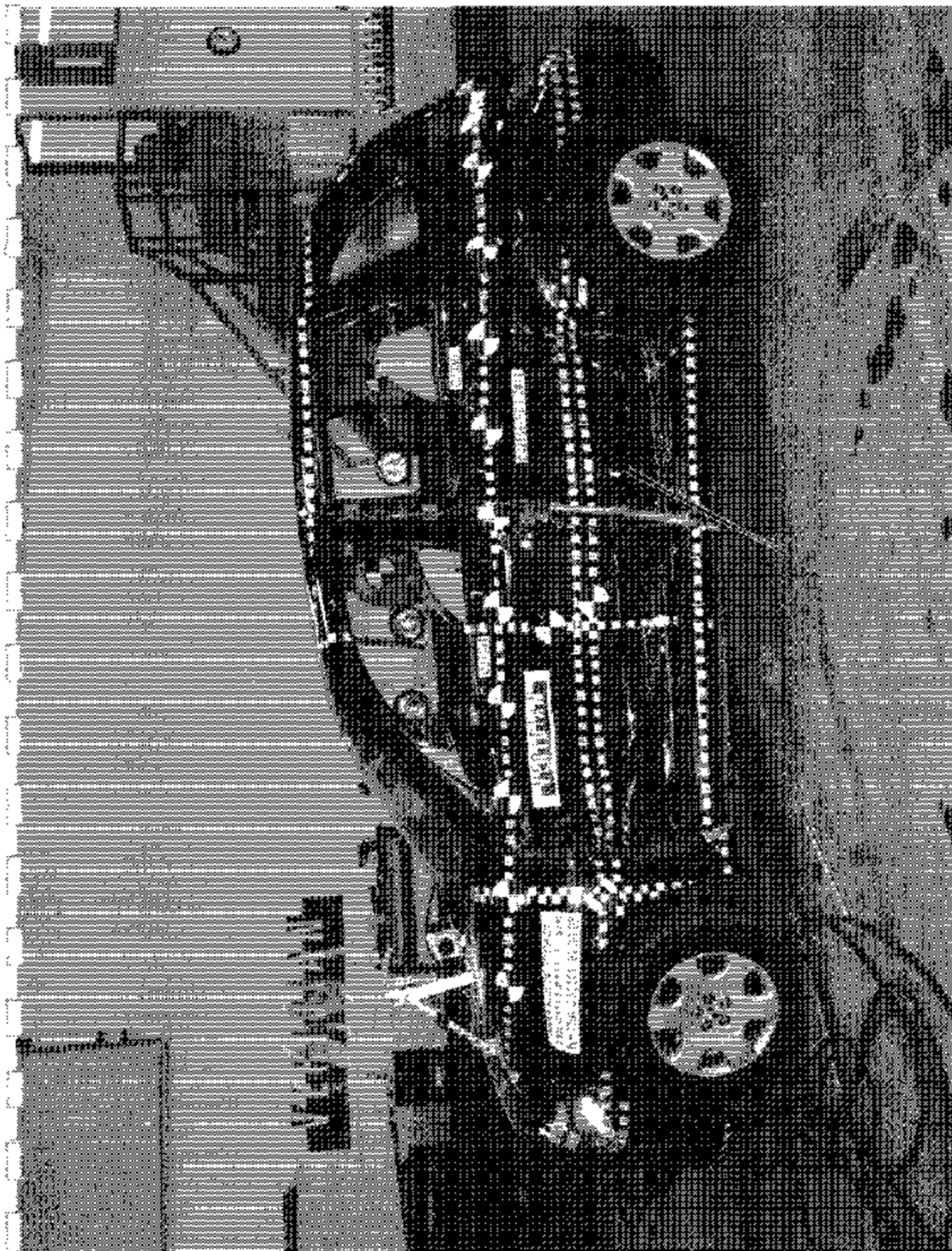


Figure A-6 POST-TEST IMPACTED SIDE VIEW OF TEST VEHICLE

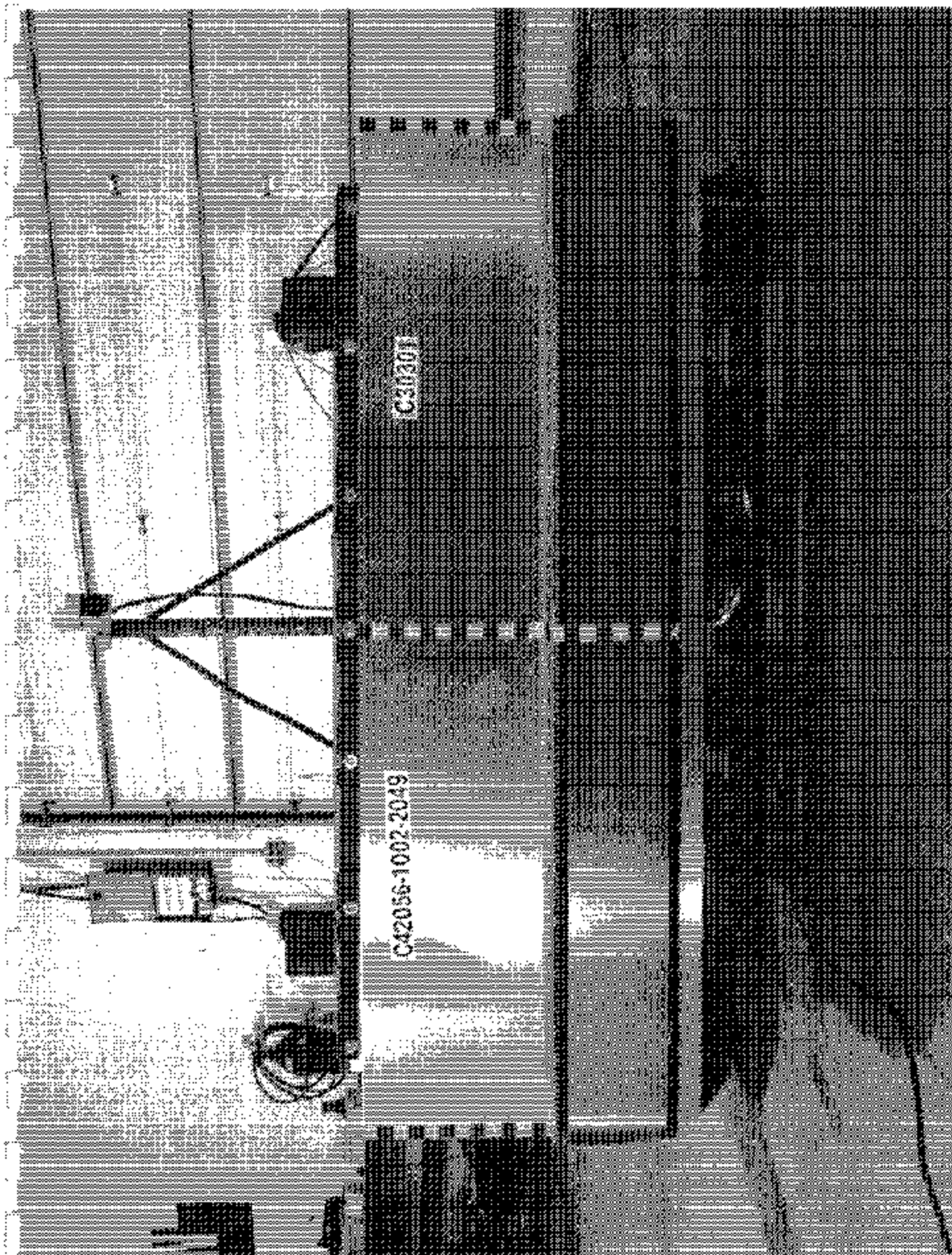


Figure A-7 PRE-TEST FRONTAL VIEW OF IMPACTOR FACE

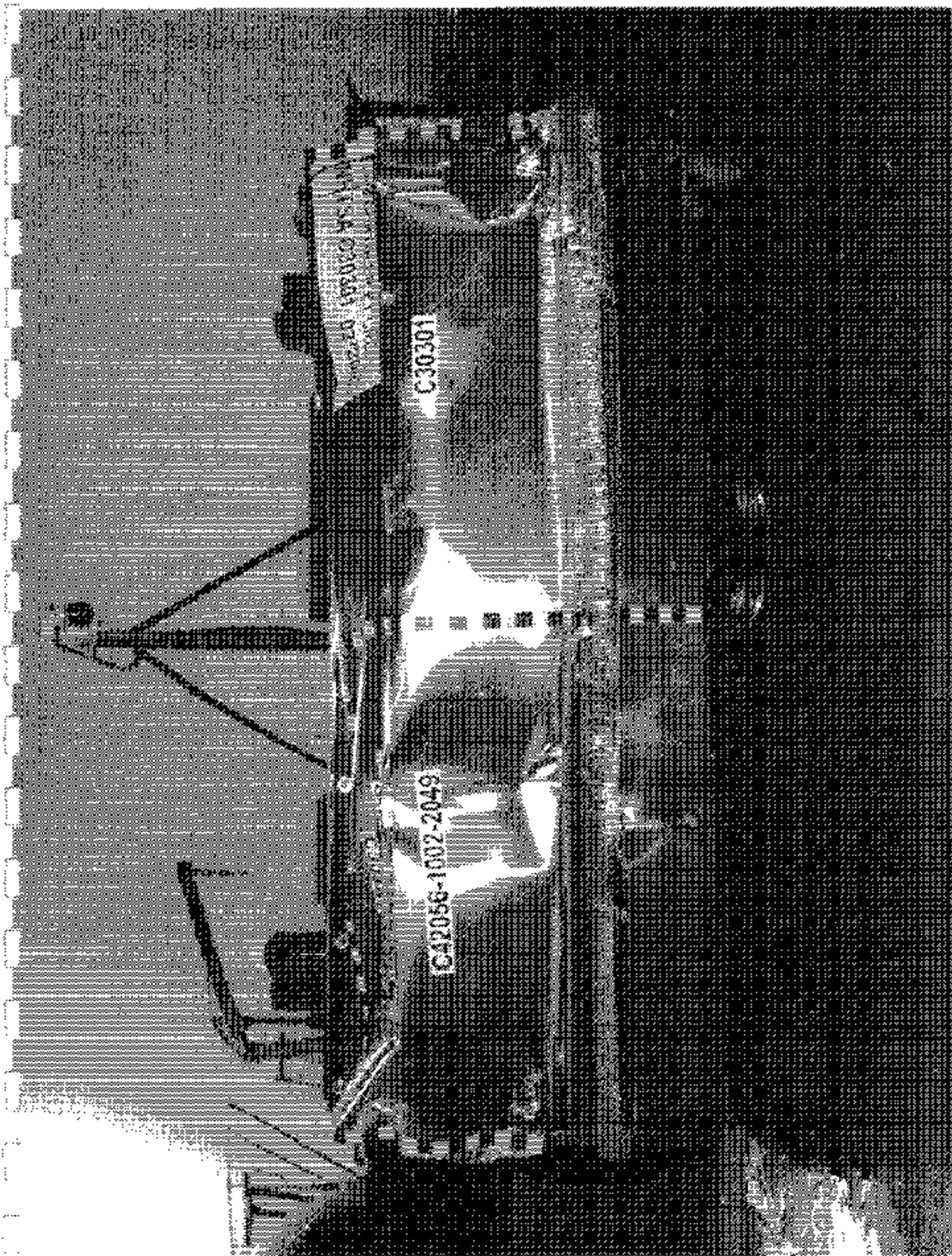


Figure A-8 POST-TEST FRONTAL VIEW OF IMPACTOR FACE

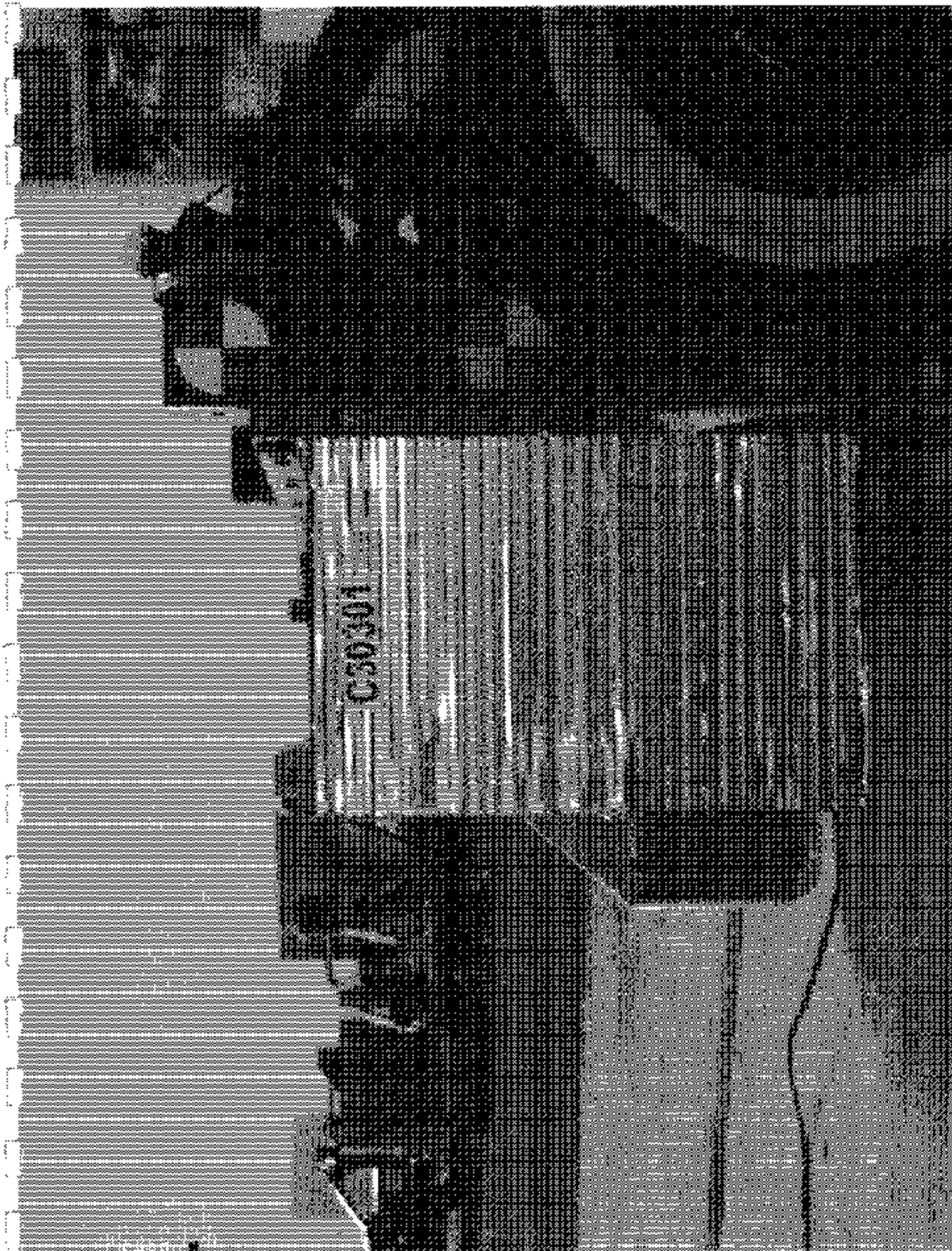


Figure A-9 PRE-TEST LEFT SIDE VIEW OF IMPACTOR FACE

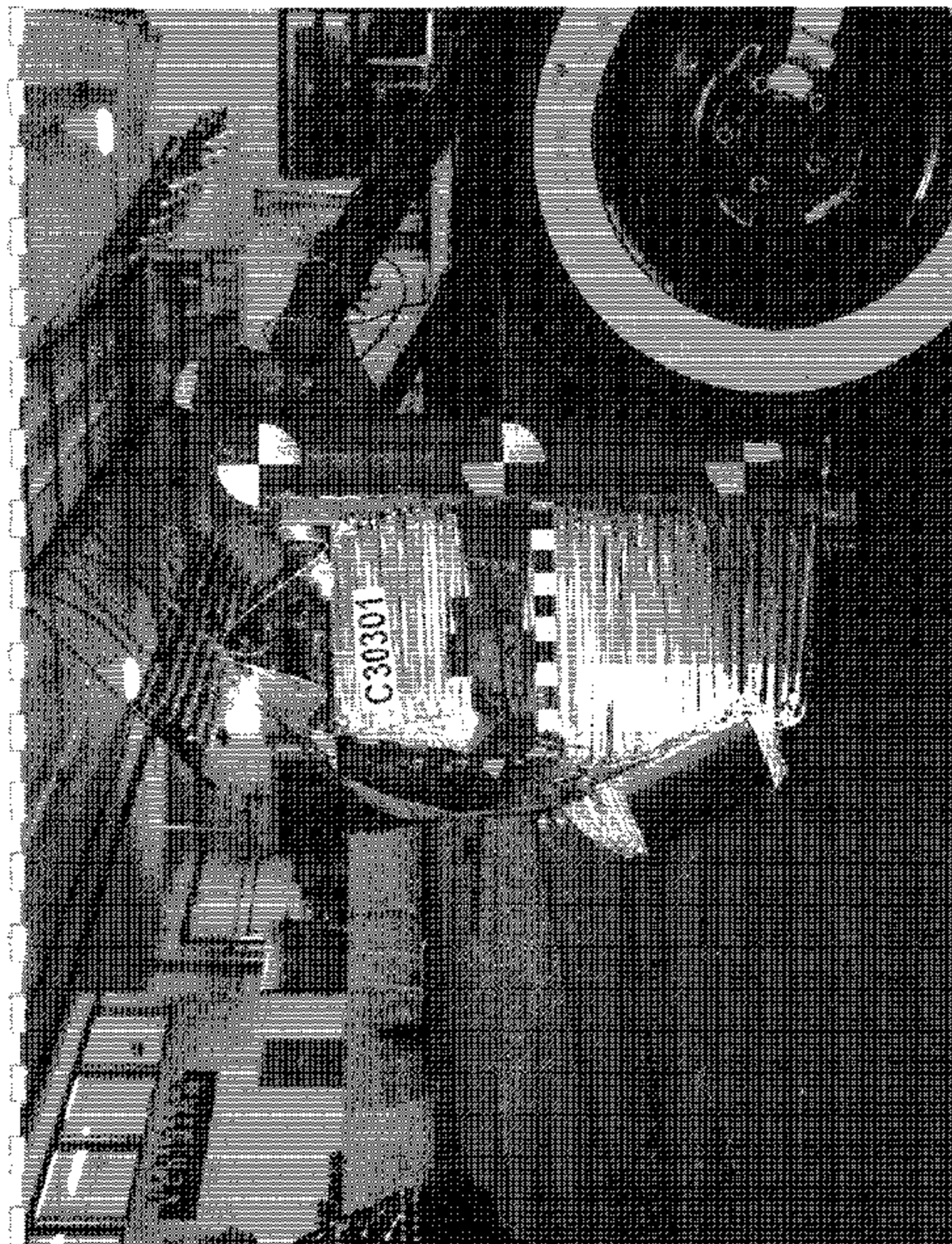


Figure A-10 POST-11 M 114T SIDE VIEW OF IMPACTOR FACE

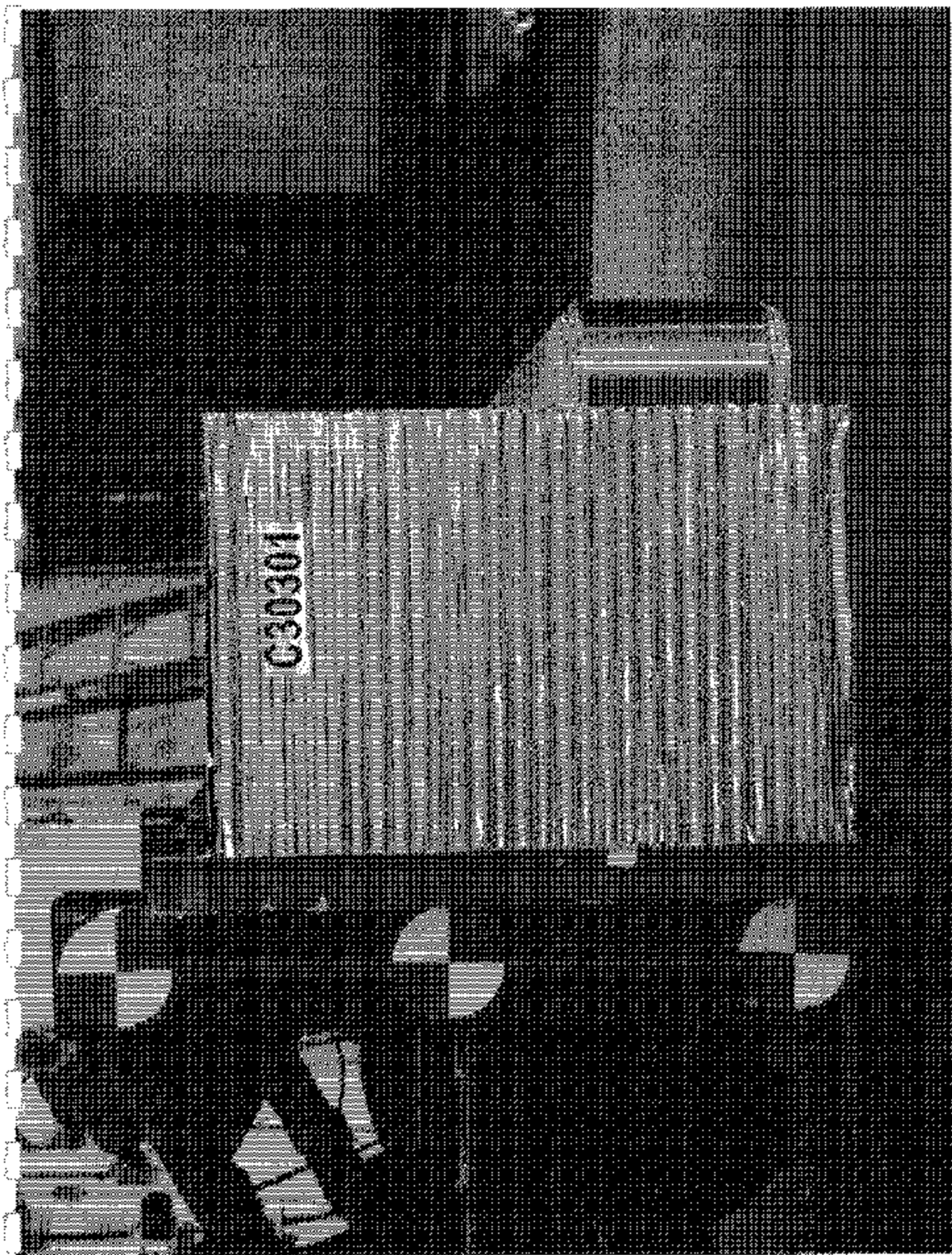


FIGURE A-1 PRE-TEST RIGHT SIDE VIEW OF IMPACTOR FACE



Figure A-12 POST-IJSI RIGHT SIDE VIEW OF IMPACTOR FACE

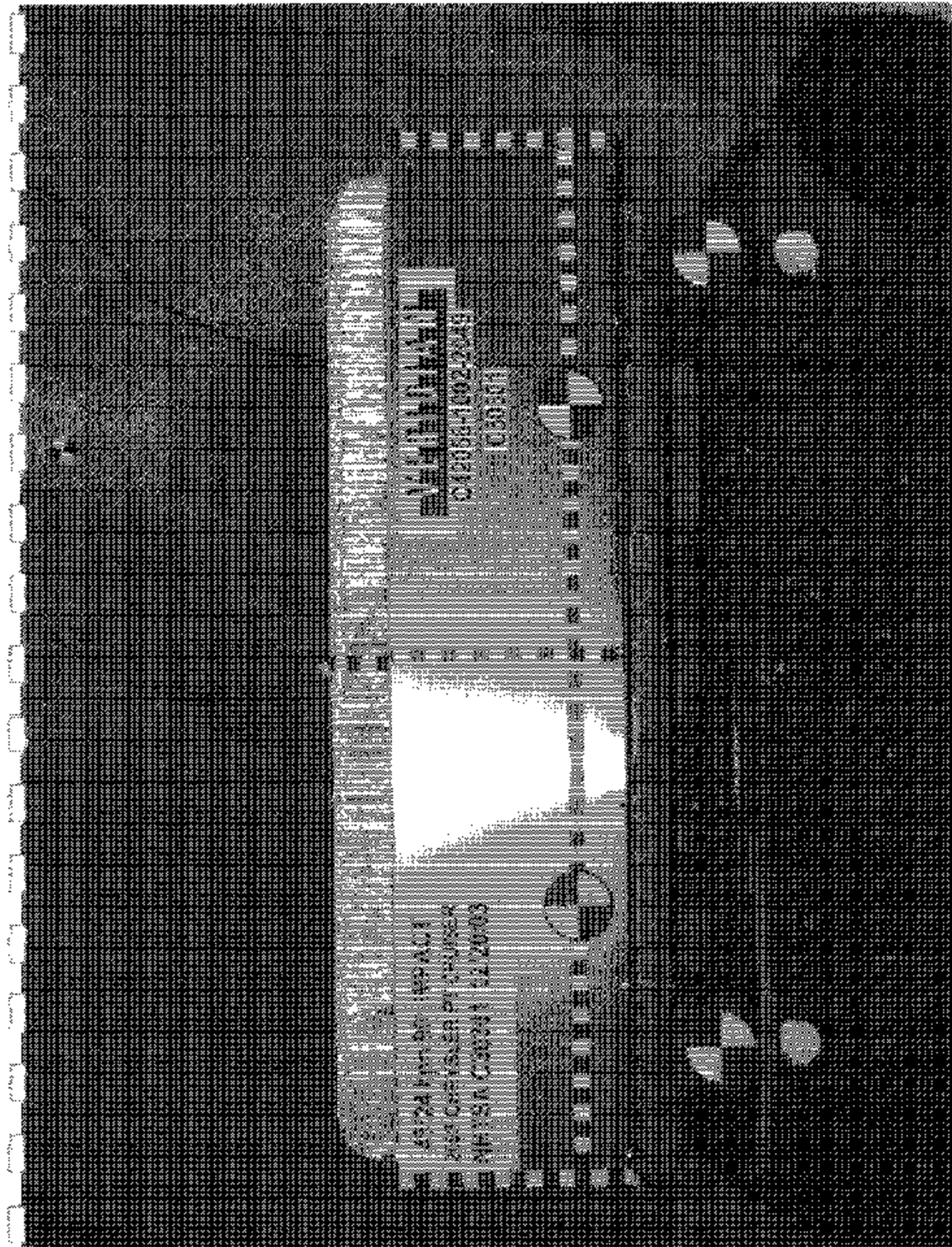
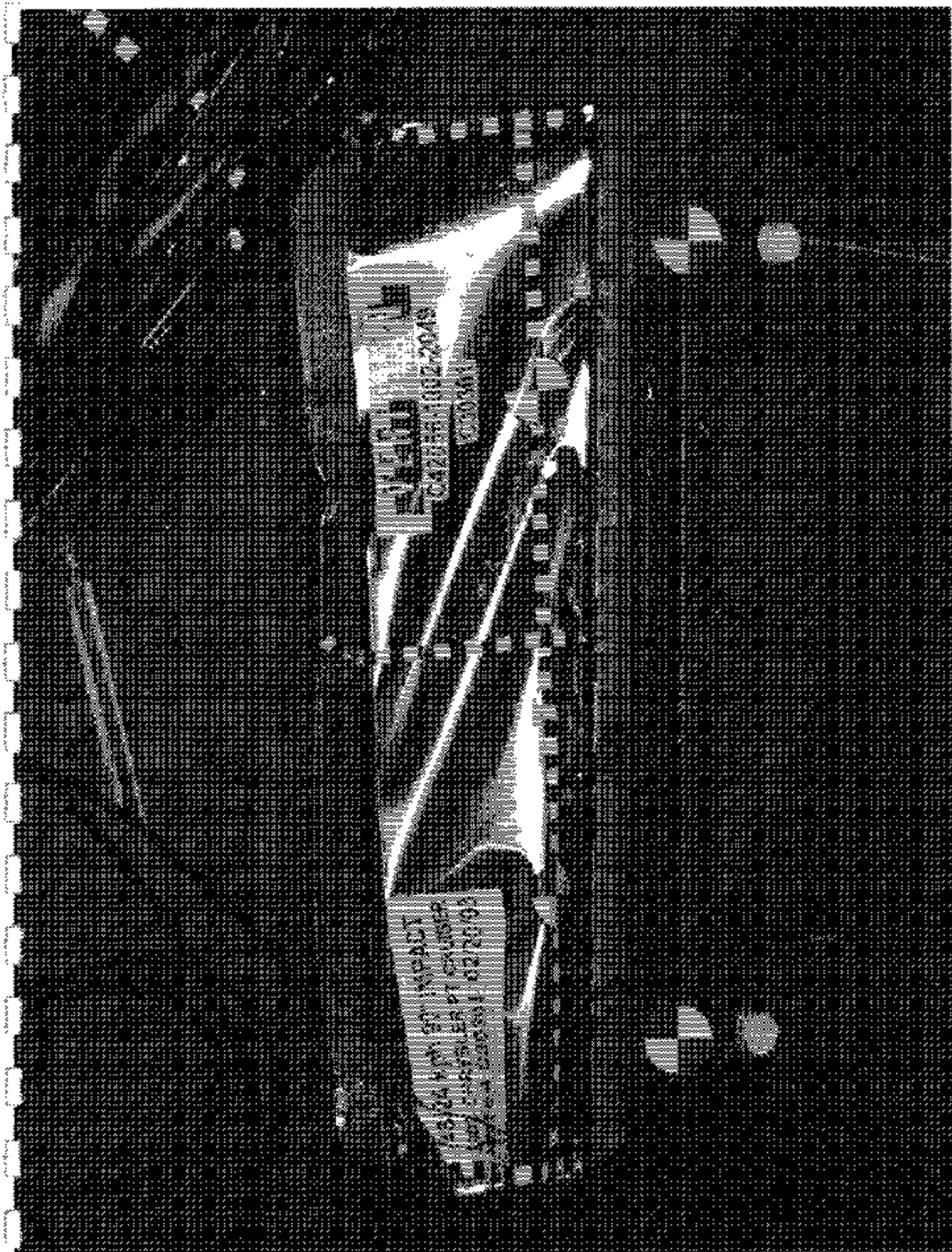


Figure A-1.3 REPRESENTATIVE VIEW OF IMPACTOR FACE



EDDY & MCDONALD WITH A TAL. SEB. T. 1861 p. 4. 2006



FIGURE A-15 PRE-TEST OVERHEAD VIEW OF ALIGNED MDR AND VEHICLE

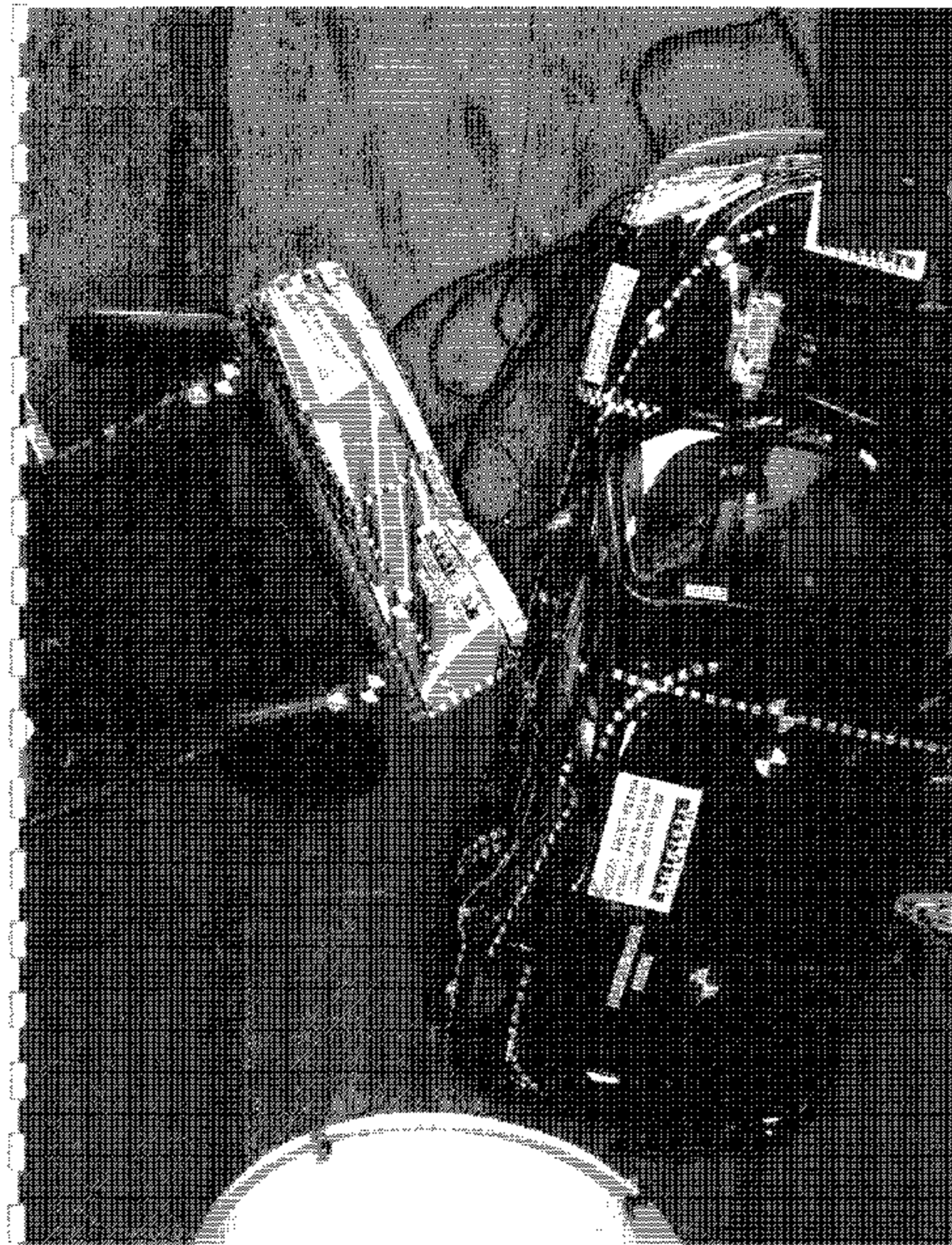




Figure A-17 PRE-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF FRONT SID



Figure A-18 POST-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF FRONT SID



Figure A-19 PK6-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF REAR SD



Figure A-20 POST-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF REAR SID

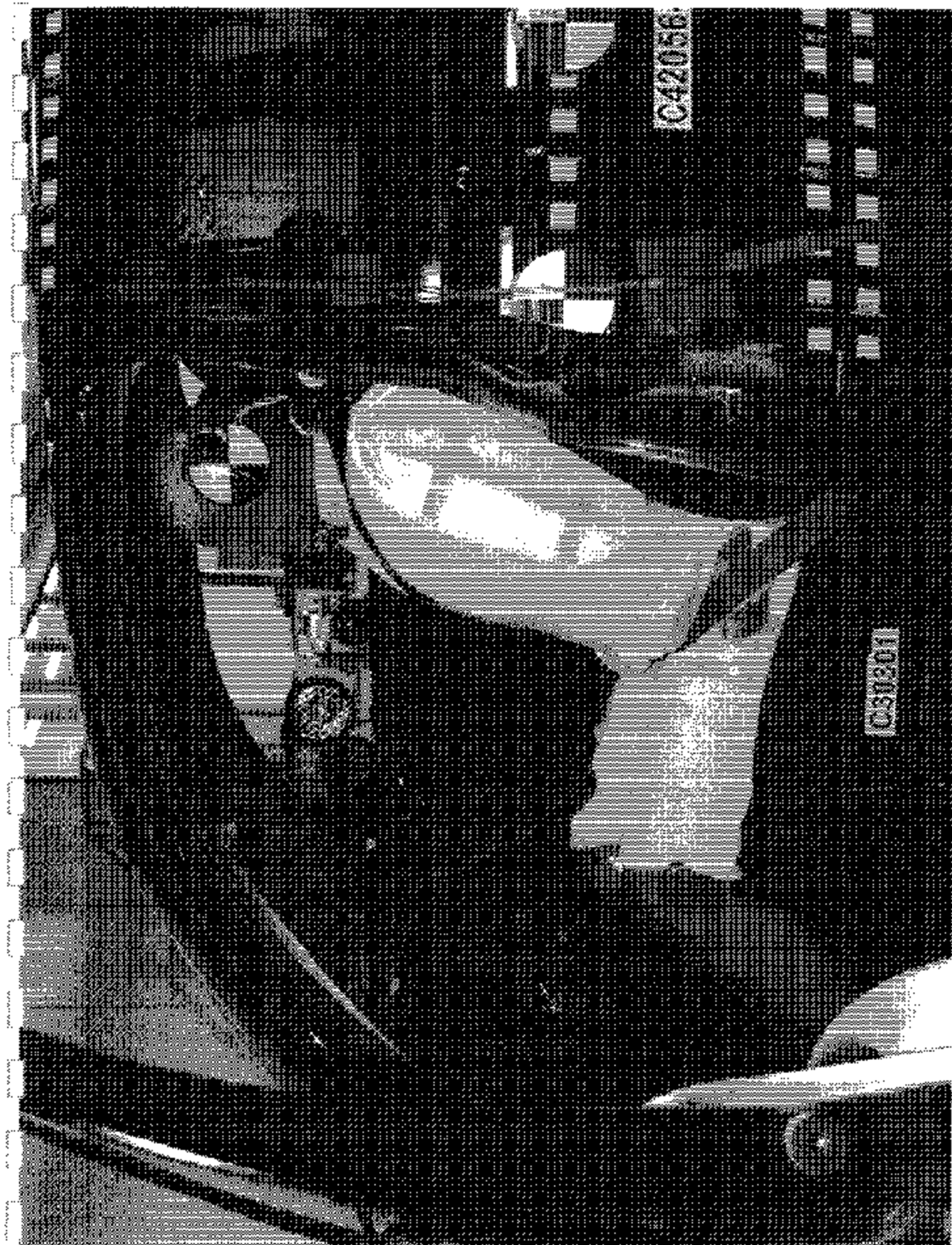


Figure A-21 PRE-TEST LEFT OCCUPANT COMPARTMENT VIEW OF FRONT SID



Figure A-22 POST-TEST LEFT OCCUPANT COMPARTMENT VIEW OF FRONT SID



Figure A-23 PRE-TEST LEFT OCCUPANT COMPARTMENT VIEW OF REAR SID



Figure A-24 POST-TEST LEFT OCCUPANT COMPARTMENT VIEW OF REAR SID



Figure A-25 PRISTINE INTERIOR OF FRONT DOOR



Figure A-26 POST-TEST INTERIOR OF FRONT DOOR SHOWING SID IMPACT LOCATIONS



Figure A-27 PRE-TEST INTERIOR OF REAR DOOR



Figure A-28 POST-TEST INTERIOR OF REAR DOOR SHOWING SID IMPACT LOCATIONS

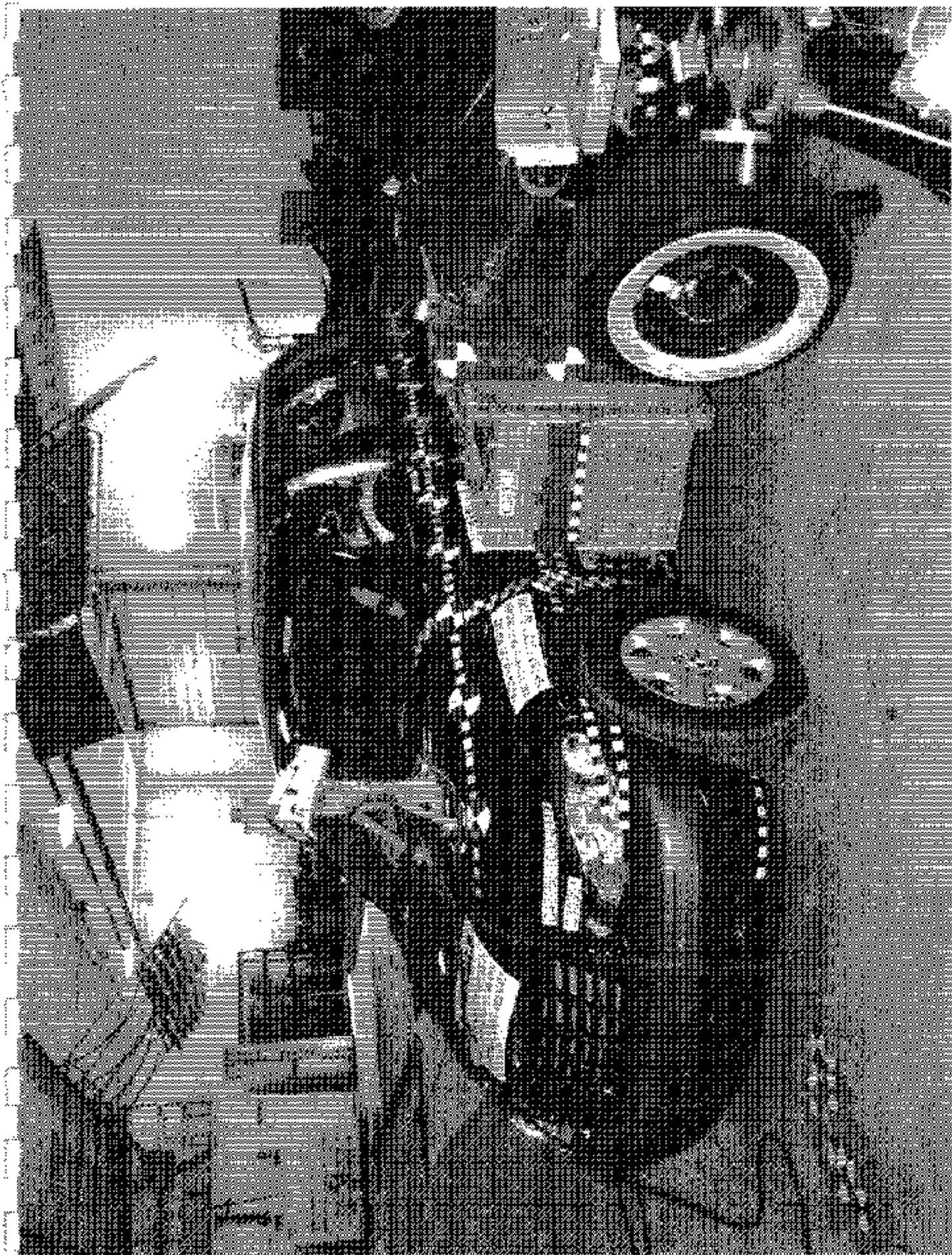


Figure A-29 PRE-TEST LEFT SIDE VIEW OF MIB WITH INDUCTOR FACE IN POSITION

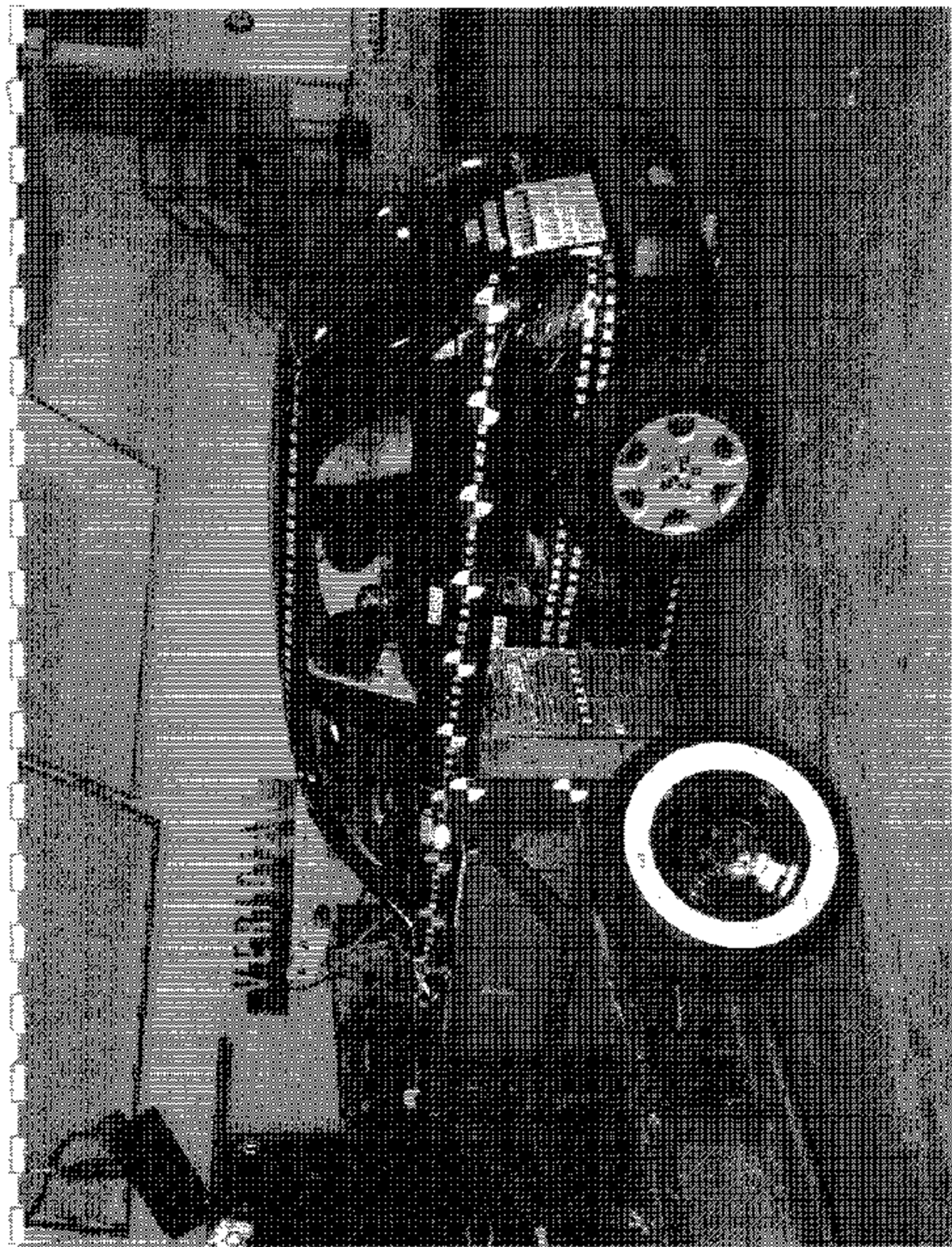


Figure A-10 PRE-TEST RIGHT SIDE VIEW OF AIDB WITH IMPACTOR FACE IN POSITION

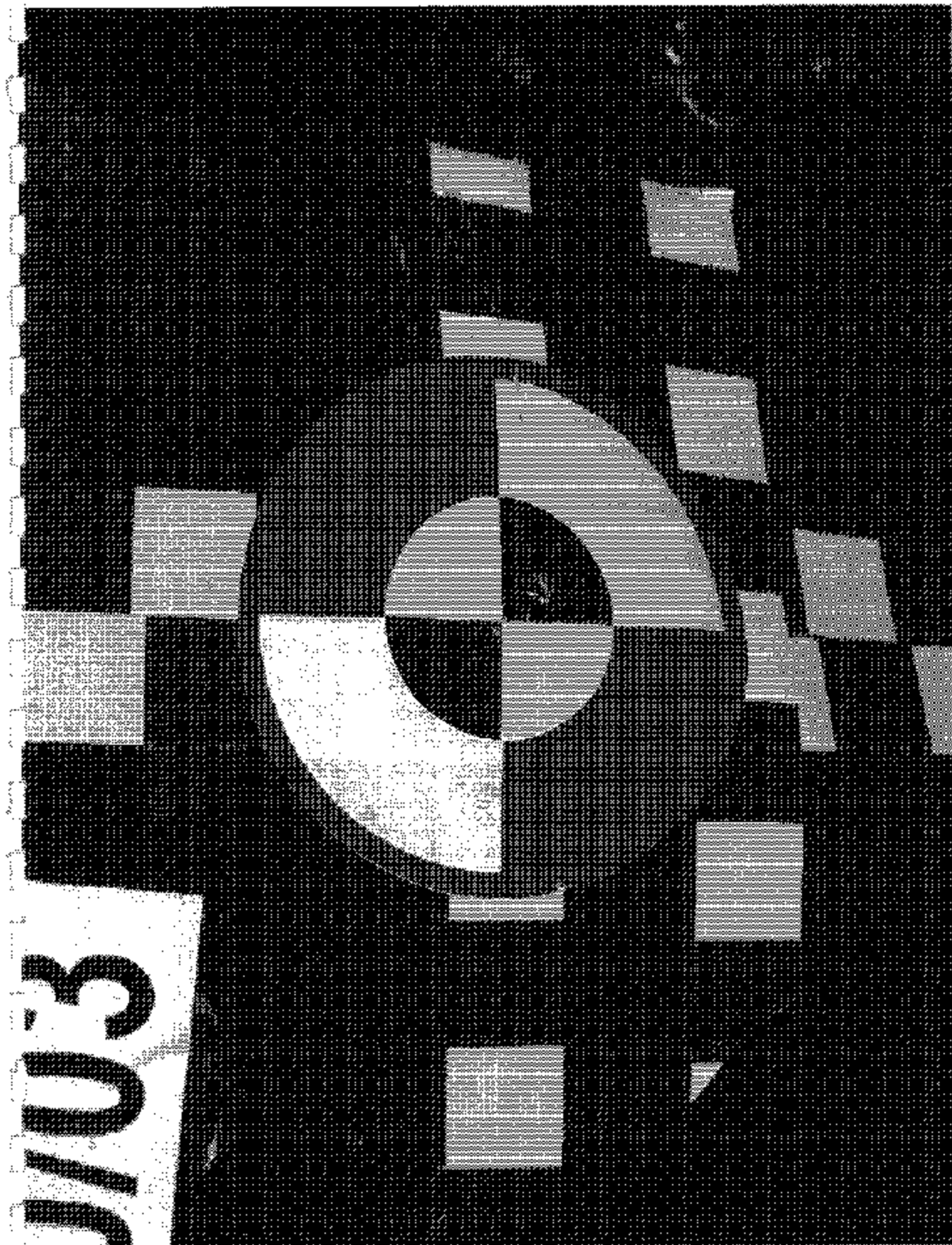


Figure A-31 POST-TEST CLOSE-UP VIEW OF IMPACT POINT TARGET



Figure A-12 CLOSE-UP VIEW OF VEHICLE'S CERTIFICATION LABEL.


	VEHICLE CAPACITY OR LESS
1st SEAT	2 PASS.
2nd SEAT	3 PASS.
LUGGAGE	115 LBS-52 kg
TOTAL	5 PASS.
TOTAL WEIGHT	865 LBS-392 kg
TIRE PRESSURE COLD	34 PSI 240 kPa
RECOMMENDED TIRE SIZES	
P195/65R15 STANDARD LOAD	
P205/55R16 STANDARD LOAD	
SEE OWNERS MANUAL FOR ADDITIONAL DATA	
PRINTED IN USA	04855 43240

Figure A-13 CLOSE-UP VIEW OF VEHICLE'S TIRE PLACARD LABEL

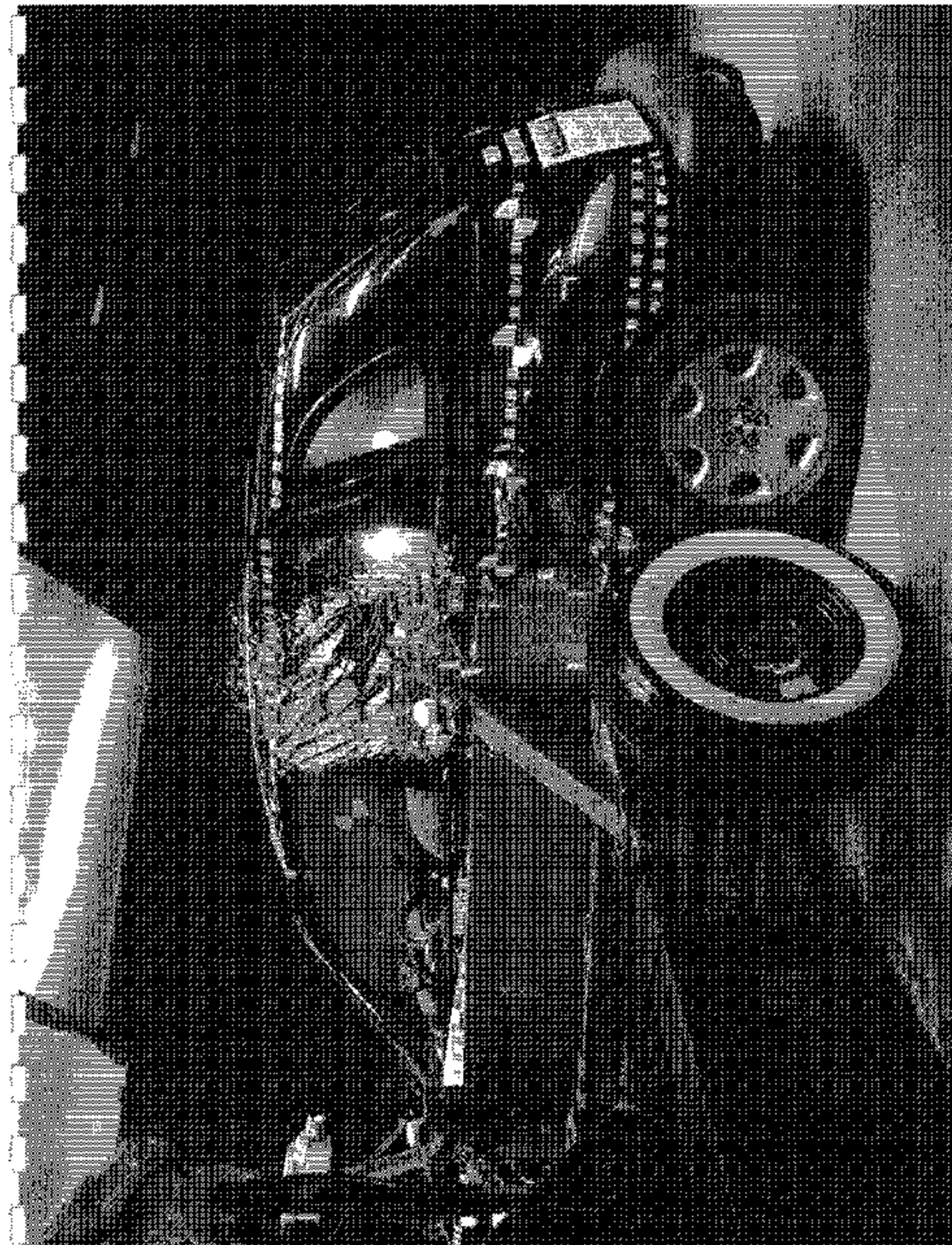


Figure A-34 IMPACT PHOTO

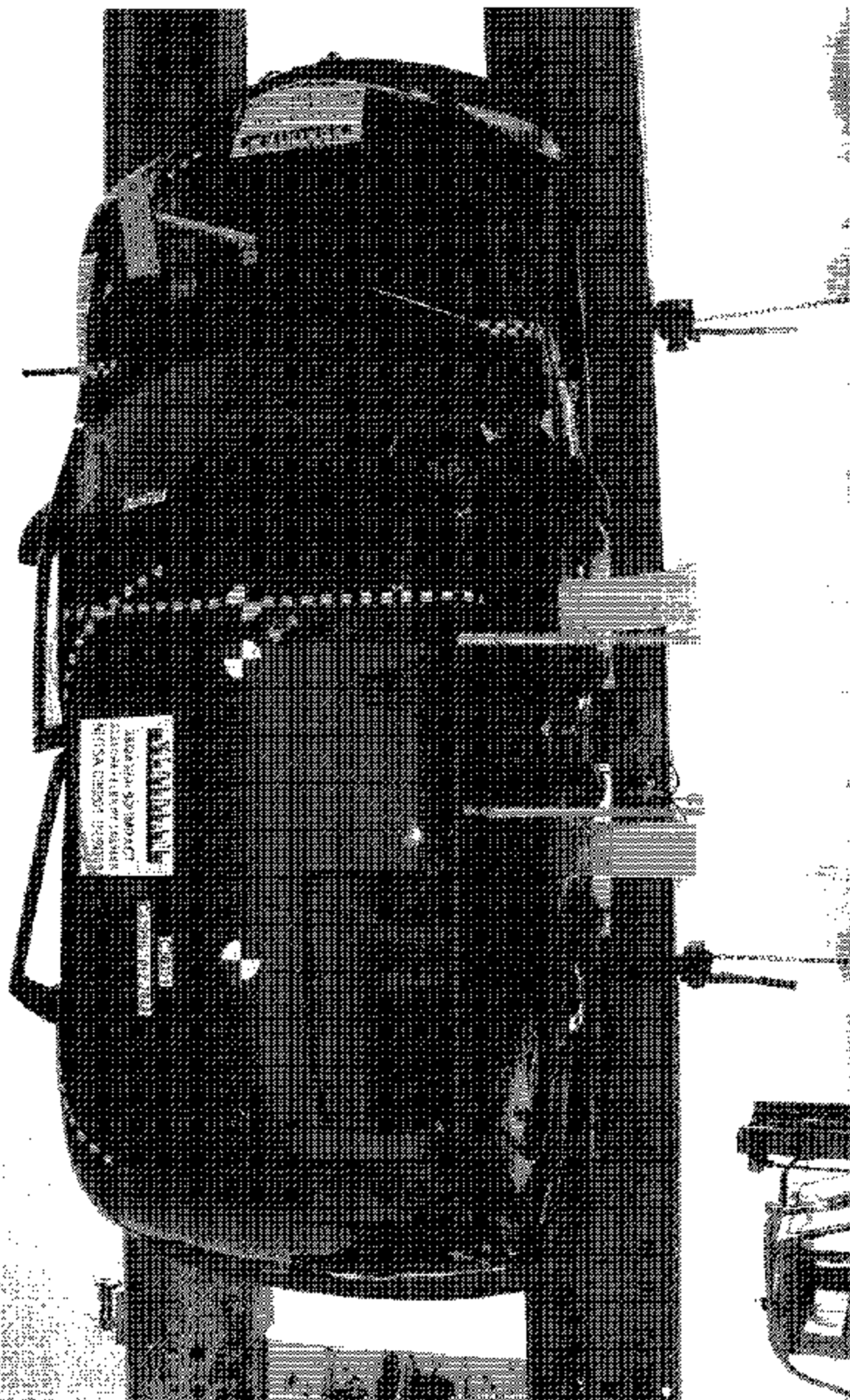


Figure A-35 ROLLER 90 DEGREES

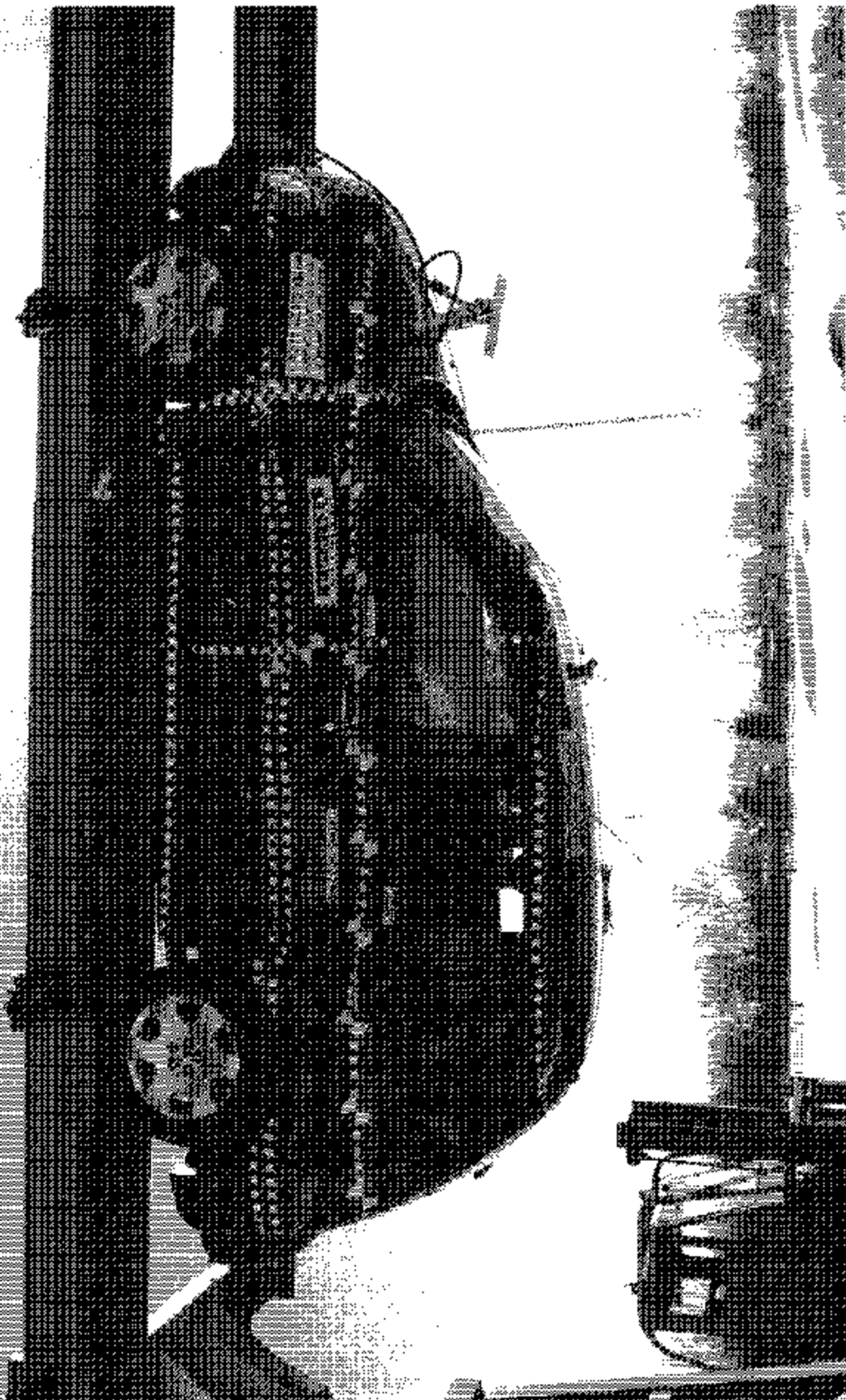


Figure A-36 ROLL OVER 180 DEGREES

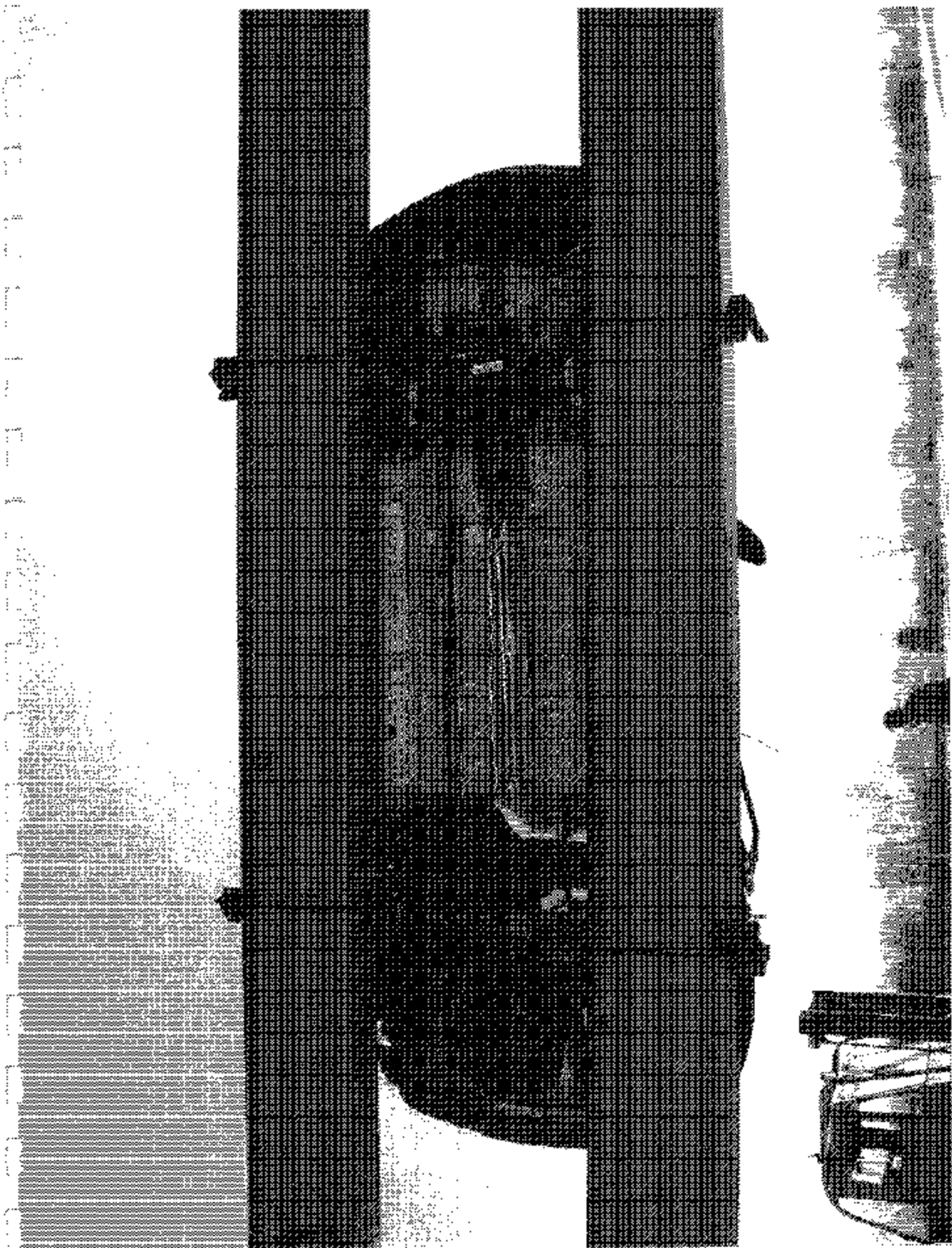


Figure A-37 H081 OVER 270 DEGREES

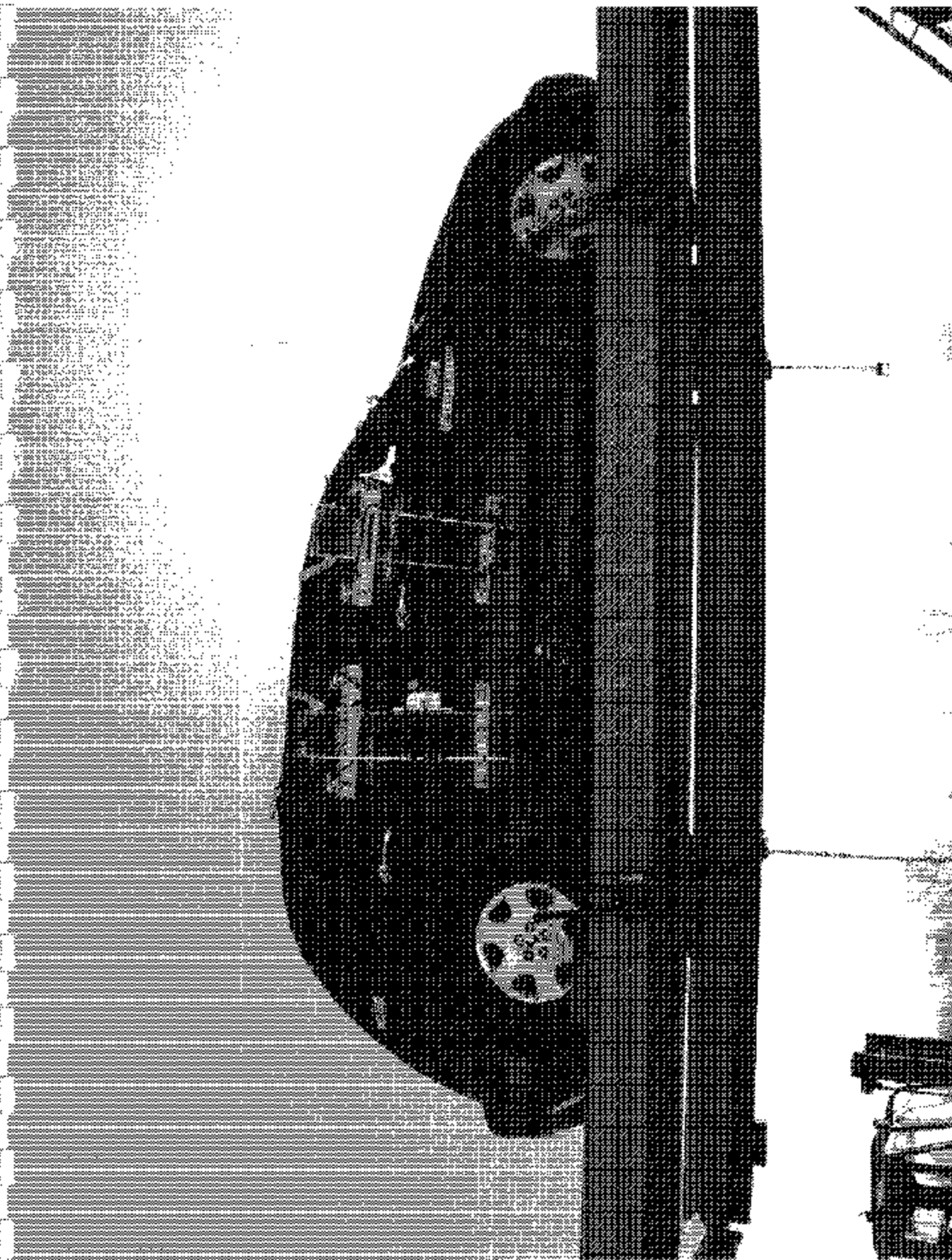


Figure A-38 ROLLOVER, 360 DEGREES

APPENDIX B

VEHICLE, MDB AND SID RESPONSE DATA

TABLE OF DATA PLOTS

DRIVER AND PASSENGER DUMMY INSTRUMENTATION PLOTS ACCELERATION DATA - FILTER CLASS 1000, LOWER SPINE - FILTER CLASS 180 INTEGRATION DATA - FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
1	DRIVER HEAD (X) ACCELERATION VS TIME	B- 6
2	DRIVER HEAD (X) VELOCITY VS TIME	B- 7
3	DRIVER HEAD (Y) ACCELERATION VS TIME	B- 8
4	DRIVER HEAD (Y) VELOCITY VS TIME	B- 9
5	DRIVER HEAD (Z) ACCELERATION VS TIME	B- 10
6	DRIVER HEAD (Z) VELOCITY VS TIME	B- 11
7	DRIVER HEAD RESULTANT ACCELERATION VS TIME	B- 12
8	DRIVER UPPER RIB (Y) ACCELERATION VS TIME	B- 13
9	DRIVER UPPER RIB (Y) VELOCITY VS TIME	B- 14
10	DRIVER LOWER RIB (Y) ACCELERATION VS TIME	B- 15
11	DRIVER LOWER RIB (Y) VELOCITY VS TIME	B- 16
12	DRIVER LOWER SPINE (Y) ACCELERATION VS TIME	B- 17
13	DRIVER LOWER SPINE (Y) VELOCITY VS TIME	B- 18
14	DRIVER PELVIC (Y) ACCELERATION VS TIME	B- 19
15	DRIVER PELVIC (Y) VELOCITY VS TIME	B- 20
16	PASSENGER HEAD (X) ACCELERATION VS TIME	B- 21
17	PASSENGER HEAD (X) VELOCITY VS TIME	B- 22
18	PASSENGER HEAD (Y) ACCELERATION VS TIME	B- 23
19	PASSENGER HEAD (Y) VELOCITY VS TIME	B- 24
20	PASSENGER HEAD (Z) ACCELERATION VS TIME	B- 25
21	PASSENGER HEAD (Z) VELOCITY VS TIME	B- 26
22	PASSENGER HEAD RESULTANT ACCELERATION VS TIME	B- 27
23	PASSENGER UPPER RIB (Y) ACCELERATION VS TIME	B- 28
24	PASSENGER UPPER RIB (Y) VELOCITY VS TIME	B- 29
25	PASSENGER LOWER RIB (Y) ACCELERATION VS TIME	B- 30
26	PASSENGER LOWER RIB (Y) VELOCITY VS TIME	B- 31
27	PASSENGER LOWER SPINE (Y) ACCELERATION VS TIME	B- 32
28	PASSENGER LOWER SPINE (Y) VELOCITY VS TIME	B- 33
29	PASSENGER PELVIC (Y) ACCELERATION VS TIME	B- 34
30	PASSENGER PELVIC (Y) VELOCITY VS TIME	B- 35

DRIVER & PASSENGER DUMMY INSTRUMENTATION PLOTS ACCELERATION DATA - FIR FILTERED

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
31	DRIVER UPPER RIB (Y) ACCELERATION VS TIME	B- 36
32	DRIVER LOWER RIB (Y) ACCELERATION VS TIME	B- 37
33	DRIVER LOWER SPINE (Y) ACCELERATION VS TIME	B- 38
34	DRIVER PELVIC (Y) ACCELERATION VS TIME	B- 39
35	PASSENGER UPPER RIB (Y) ACCELERATION VS TIME	B- 40
36	PASSENGER LOWER RIB (Y) ACCELERATION VS TIME	B- 41
37	PASSENGER LOWER SPINE (Y) ACCELERATION VS TIME	B- 42
38	PASSENGER PELVIC (Y) ACCELERATION VS TIME	B- 43

TEST VEHICLE INSTRUMENTATION PLOTS
ACCELERATION DATA - FILTER CLASS 60
INTEGRATION DATA - FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
39	RIGHT SIDE SILL AT FRONT SEAT (X) ACCELERATION VS TIME	B- 44
40	RIGHT SIDE SILL AT FRONT SEAT (X) VELOCITY VS TIME	B- 45
41	RIGHT SIDE SILL AT FRONT SEAT (Y) ACCELERATION VS TIME	B- 46
42	RIGHT SIDE SILL AT FRONT SEAT (Y) VELOCITY VS TIME	B- 47
43	RIGHT SIDE SILL AT FRONT SEAT (Z) ACCELERATION VS TIME	B- 48
44	RIGHT SIDE SILL AT FRONT SEAT (Z) VELOCITY VS TIME	B- 49
45	RIGHT SIDE SILL AT FRONT SEAT RESULTANT ACCELERATION VS TIME	B- 50
46	RIGHT SIDE SILL AT REAR SEAT (X) ACCELERATION VS TIME	B- 51
47	RIGHT SIDE SILL AT REAR SEAT (X) VELOCITY VS TIME	B- 52
48	RIGHT SIDE SILL AT REAR SEAT (Y) ACCELERATION VS TIME	B- 53
49	RIGHT SIDE SILL AT REAR SEAT (Y) VELOCITY VS TIME	B- 54
50	RIGHT SIDE SILL AT REAR SEAT (Z) ACCELERATION VS TIME	B- 55
51	RIGHT SIDE SILL AT REAR SEAT (Z) VELOCITY VS TIME	B- 56
52	RIGHT SIDE SILL AT REAR SEAT RESULTANT ACCELERATION VS TIME	B- 57
53	REAR FLOORPAN ABOVE AXLE (X) ACCELERATION VS TIME	B- 58
54	REAR FLOORPAN ABOVE AXLE (X) VELOCITY VS TIME	B- 59
55	REAR FLOORPAN ABOVE AXLE (Y) ACCELERATION VS TIME	B- 60
56	REAR FLOORPAN ABOVE AXLE (Y) VELOCITY VS TIME	B- 61
57	REAR FLOORPAN ABOVE AXLE (Z) ACCELERATION VS TIME	B- 62
58	REAR FLOORPAN ABOVE AXLE (Z) VELOCITY VS TIME	B- 63
59	REAR FLOORPAN ABOVE AXLE RESULTANT ACCELERATION VS TIME	B- 64
60	LEFT SIDE SILL AT REAR SEAT (Y) ACCELERATION VS TIME	B- 65
61	LEFT SIDE SILL AT REAR SEAT (Y) VELOCITY VS TIME	B- 66
62	LEFT SIDE SILL AT FRONT SEAT (Y) ACCELERATION VS TIME	B- 67
63	LEFT SIDE SILL AT FRONT SEAT (Y) VELOCITY VS TIME	B- 68
64	RIGHT REAR OCCUPANT COMPARTMENT (Y) ACCELERATION VS TIME	B- 69
65	RIGHT REAR OCCUPANT COMPARTMENT (Y) VELOCITY VS TIME	B- 70
66	LOWER B-POST (Y) ACCELERATION VS TIME	B- 71
67	LOWER B-POST (Y) VELOCITY VS TIME	B- 72
68	MIDDLE B-POST (Y) ACCELERATION VS TIME	B- 73
69	MIDDLE B-POST (Y) VELOCITY VS TIME	B- 74
70	LOWER A-POST (Y) ACCELERATION VS TIME	B- 75
71	LOWER A-POST (Y) VELOCITY VS TIME	B- 76
72	MIDDLE A-POST (Y) ACCELERATION VS TIME	B- 77
73	MIDDLE A-POST (Y) VELOCITY VS TIME	B- 78
74	FRONT SEAT TRACK (Y) ACCELERATION VS TIME	B- 79
75	FRONT SEAT TRACK (Y) VELOCITY VS TIME	B- 80
76	REAR SEAT TRACK (Y) ACCELERATION VS TIME	B- 81
77	REAR SEAT TRACK (Y) VELOCITY VS TIME	B- 82

TEST VEHICLE INSTRUMENTATION PLOTS
ACCELERATION DATA - FILTER CLASS 60
INTEGRATION DATA - FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
78	VEHICLE CENTER OF GRAVITY (X) ACCELERATION VS TIME	B- 83
79	VEHICLE CENTER OF GRAVITY (X) VELOCITY VS TIME	B- 84
80	VEHICLE CENTER OF GRAVITY (Y) ACCELERATION VS TIME	B- 85
81	VEHICLE CENTER OF GRAVITY (Y) VELOCITY ACCELERATION VS TIME	B- 86
82	VEHICLE CENTER OF GRAVITY (Z) ACCELERATION VS TIME	B- 87
83	VEHICLE CENTER OF GRAVITY (Z) VELOCITY VS TIME	B- 88
84	VEHICLE CENTER OF GRAVITY RESULTANT ACCELERATION VS TIME	B- 89

MDB INSTRUMENTATION PLOTS
ACCELERATION DATA - FILTER CLASS 60
INTEGRATION DATA - FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
85	MDB CENTER OF GRAVITY (X) ACCELERATION VS TIME	B- 90
86	MDB CENTER OF GRAVITY (X) VELOCITY VS TIME	B- 91
87	MDB CENTER OF GRAVITY (Y) ACCELERATION VS TIME	B- 92
88	MDB CENTER OF GRAVITY (Y) VELOCITY VS TIME	B- 93
89	MDB CENTER OF GRAVITY (Z) ACCELERATION VS TIME	B- 94
90	MDB CENTER OF GRAVITY (Z) VELOCITY VS TIME	B- 95
91	MDB CENTER OF GRAVITY RESULTANT ACCELERATION VS TIME	B- 96
92	MDB REAR (X) ACCELERATION VS TIME	B- 97
93	MDB REAR (X) VELOCITY VS TIME	B- 98
94	MDB REAR (Y) ACCELERATION VS TIME	B- 99
95	MDB REAR (Y) VELOCITY VS TIME	B- 100

**DRIVER & PASSENGER DUMMY INSTRUMENTATION PLOTS (REDUNDANT)
ACCELERATION DATA - FILTER CLASS 1000, LOWER SPINE - FILTER CLASS 180
INTEGRATION DATA - FILTER CLASS 180**

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
96	DRIVER UPPER RIB (Y) ACCELERATION VS TIME	B- 101
97	DRIVER UPPER RIB (Y) VELOCITY VS TIME	B- 102
98	DRIVER LOWER RIB (Y) ACCELERATION VS TIME	B- 103
99	DRIVER LOWER RIB (Y) VELOCITY VS TIME	B- 104
100	DRIVER LOWER SPINE (Y) ACCELERATION VS TIME	B- 105
101	DRIVER LOWER SPINE (Y) VELOCITY VS TIME	B- 106
102	DRIVER PELVIC (Y) ACCELERATION VS TIME	B- 107
103	DRIVER PELVIC (Y) VELOCITY VS TIME	B- 108
104	PASSENGER UPPER RIB (Y) ACCELERATION VS TIME	B- 109
105	PASSENGER UPPER RIB (Y) VELOCITY VS TIME	B- 110
106	PASSENGER LOWER RIB (Y) ACCELERATION VS TIME	B- 111
107	PASSENGER LOWER RIB (Y) VELOCITY VS TIME	B- 112
108	PASSENGER LOWER SPINE (Y) ACCELERATION VS TIME	B- 113
109	PASSENGER LOWER SPINE (Y) VELOCITY VS TIME	B- 114
110	PASSENGER PELVIC (Y) ACCELERATION VS TIME	B- 115
111	PASSENGER PELVIC (Y) VELOCITY VS TIME	B- 116

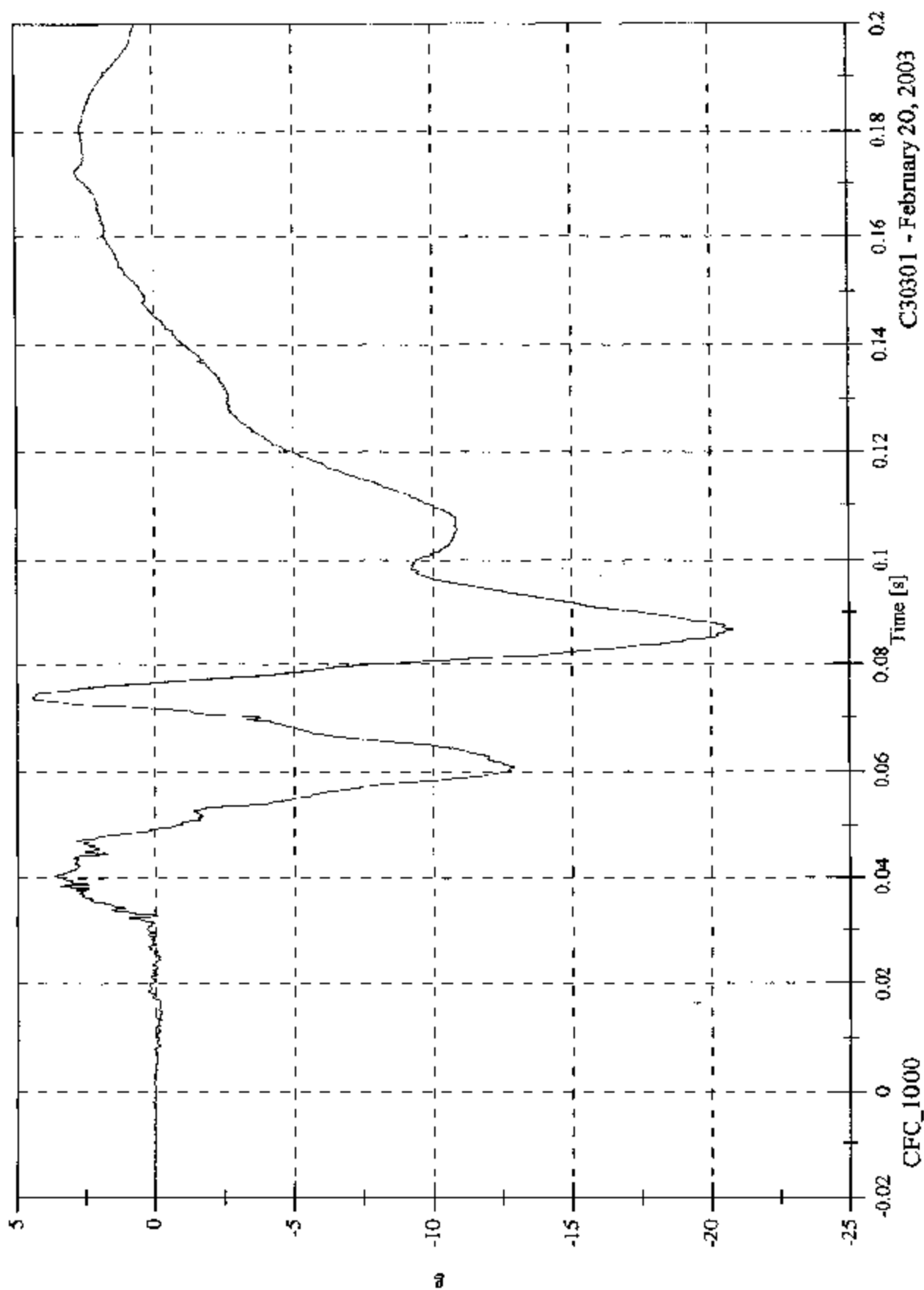
**DRIVER & PASSENGER DUMMY INSTRUMENTATION PLOTS (REDUNDANT)
ACCELERATION DATA - FIR FILTERED**

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
112	DRIVER UPPER RIB (Y) ACCELERATION VS TIME	B- 117
113	DRIVER LOWER RIB (Y) ACCELERATION VS TIME	B- 118
114	DRIVER LOWER SPINE (Y) ACCELERATION VS TIME	B- 119
115	DRIVER PELVIC (Y) ACCELERATION VS TIME	B- 120
116	PASSENGER UPPER RIB (Y) ACCELERATION VS TIME	B- 121
117	PASSENGER LOWER RIB (Y) ACCELERATION VS TIME	B- 122
118	PASSENGER LOWER SPINE (Y) ACCELERATION VS TIME	B- 123
119	PASSENGER PELVIC (Y) ACCELERATION VS TIME	B- 124

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 4.4 [g] at 0.074 [s]
Min: -20.8 [g] at 0.087 [s]

V2P1 Head x

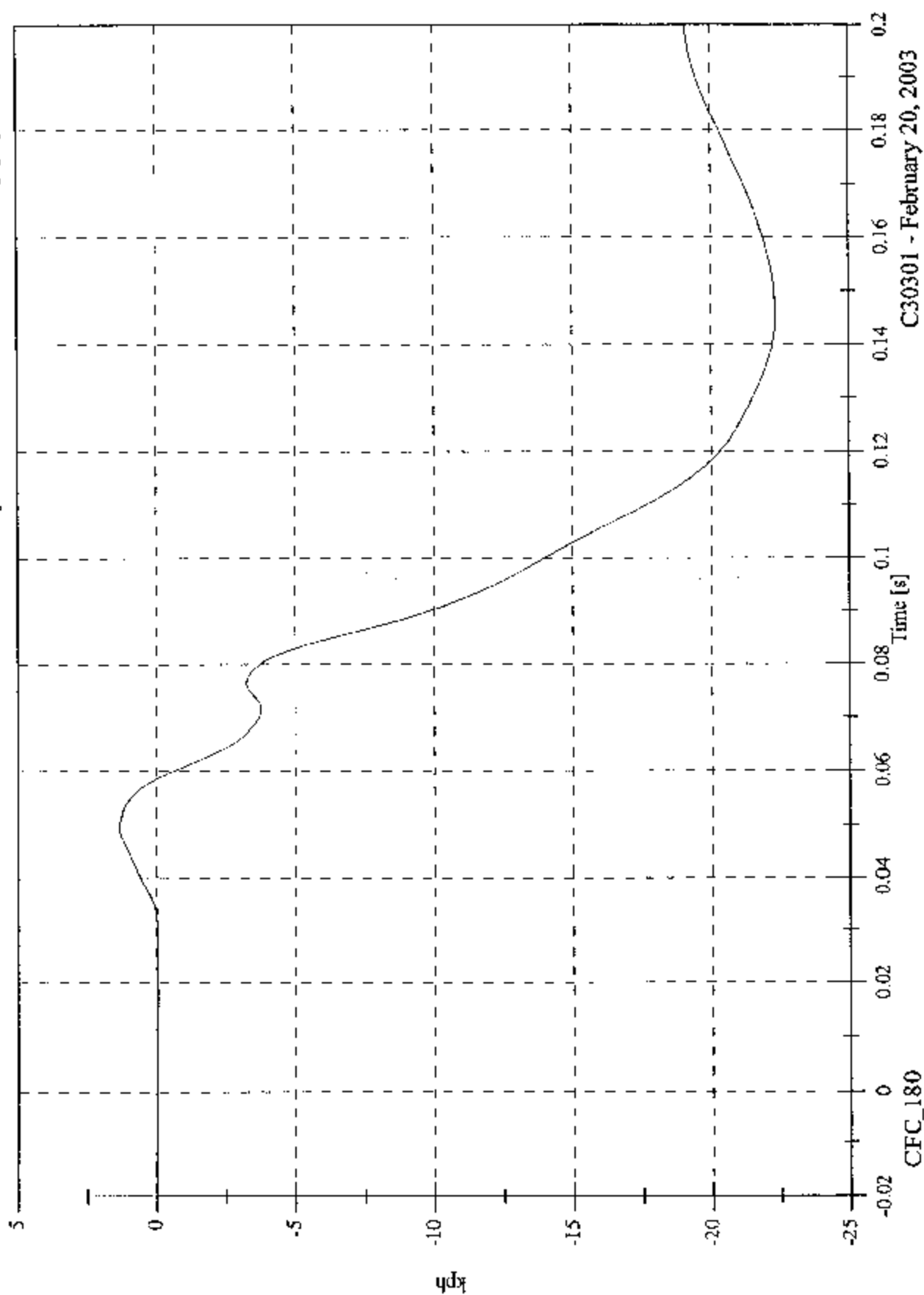


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 1.4 [kph] at 0.049 [s]
Min: -22.4 [kph] at 0.145 [s]

V2P1 Head x Velocity



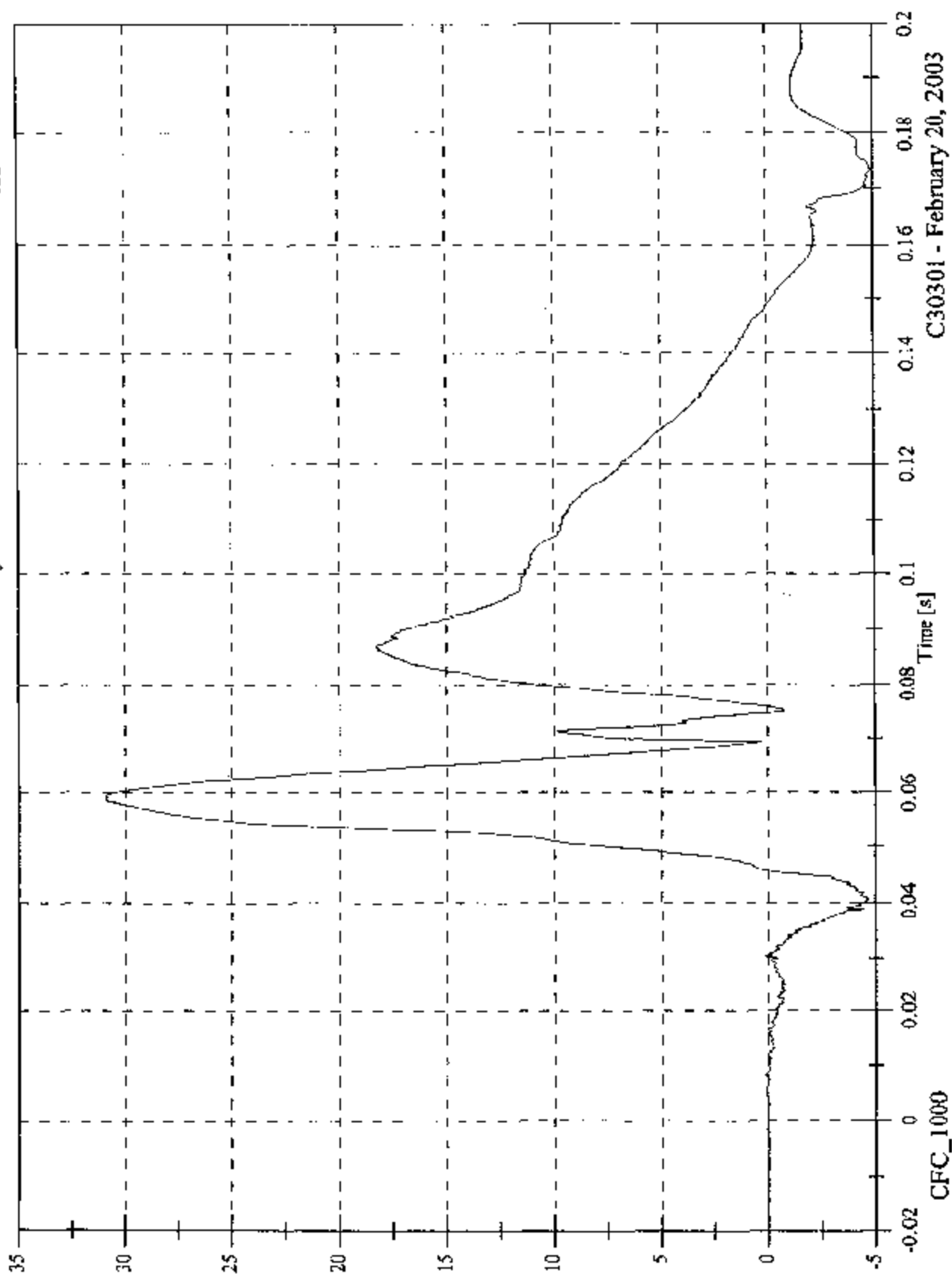
CFC_180

C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 30.9 [g] at 0.059 [s]
Min: -4.9 [g] at 0.174 [s]

V2P1 Head y

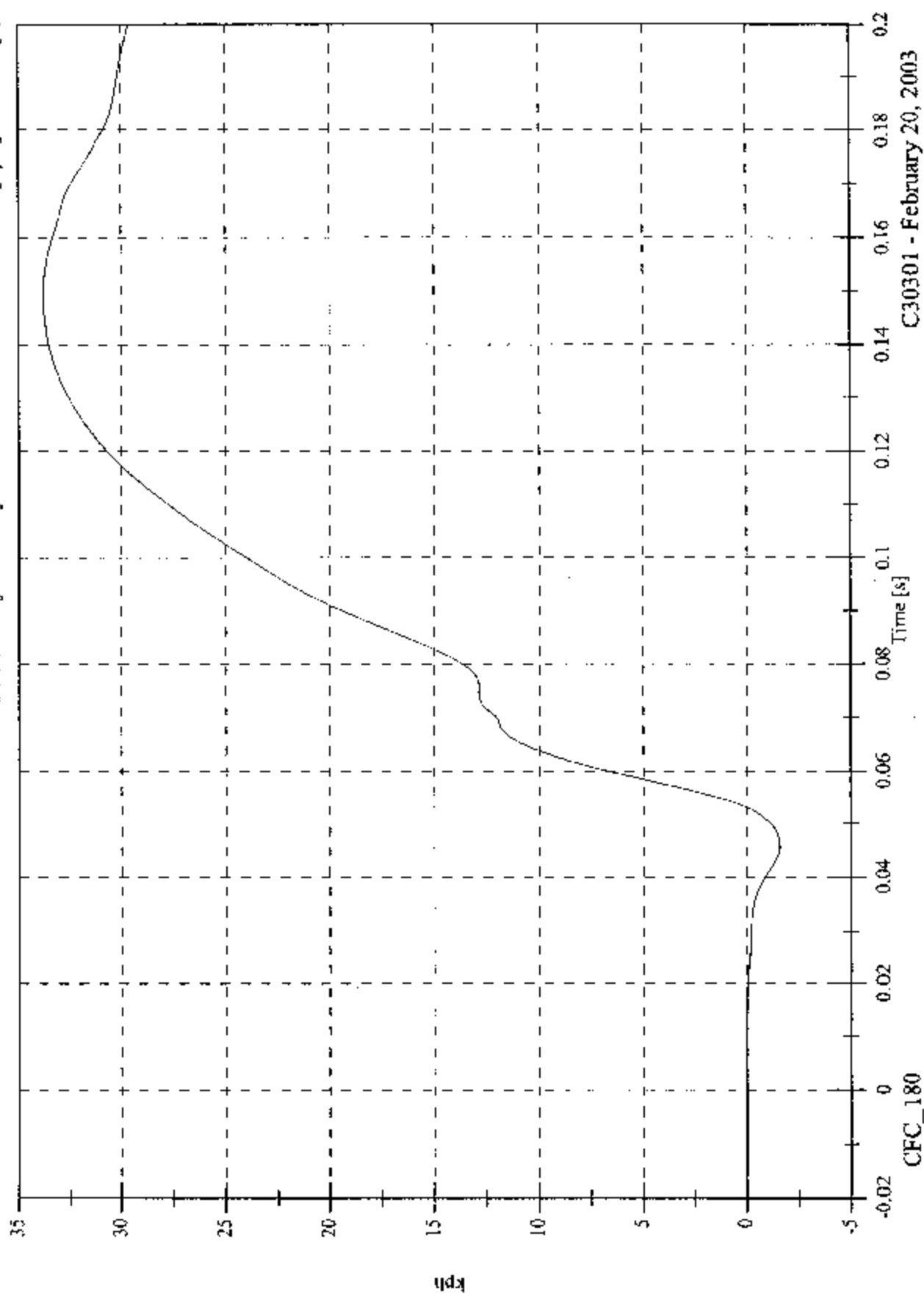


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 33.8 [kph] at 0.149 [s]
Min: -1.6 [kph] at 0.046 [s]

V2P1 Head y Velocity

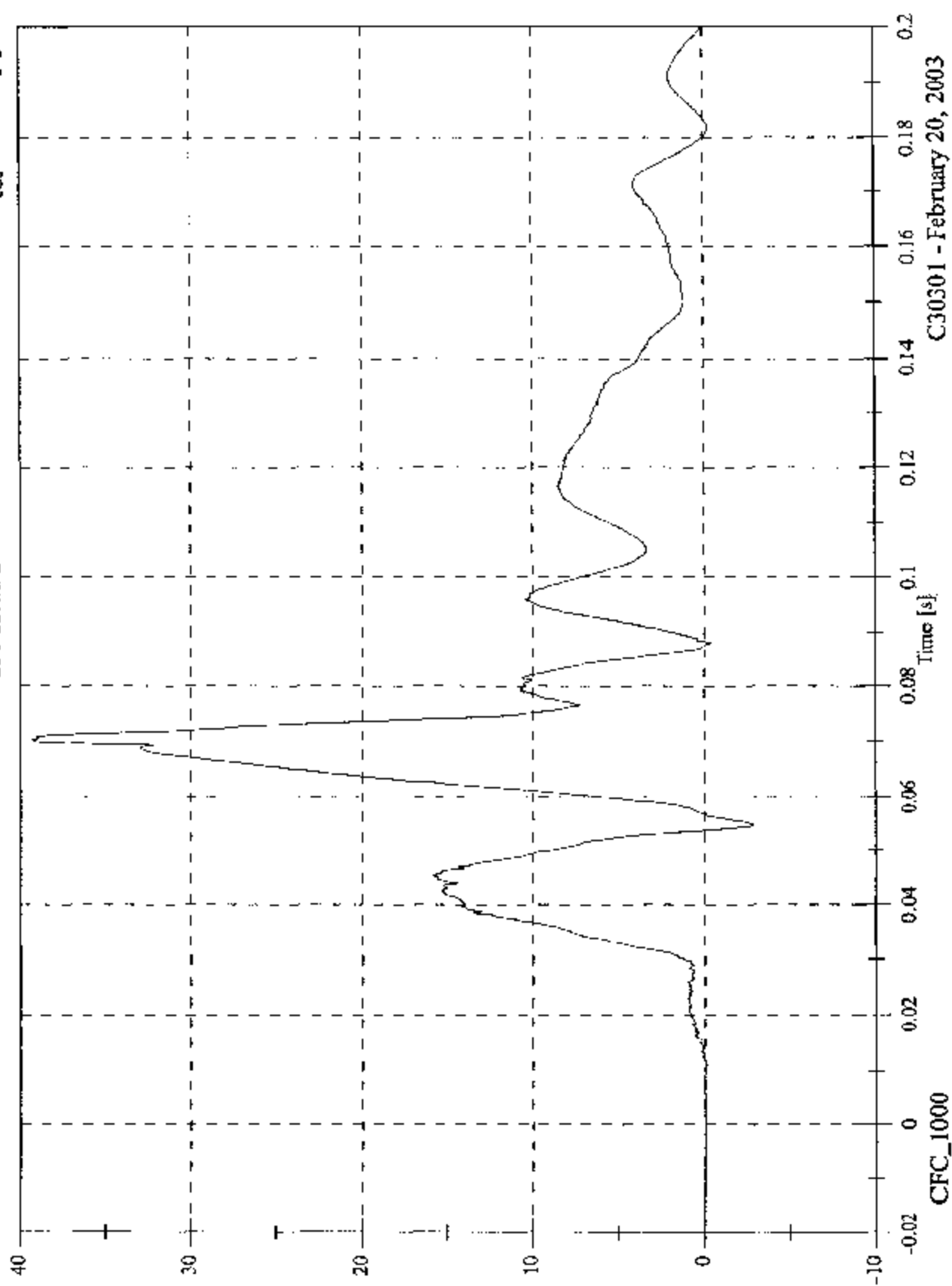


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 39.3 [g] at 0.070 [s]
Min: -2.8 [g] at 0.055 [s]

V2P1 Head z

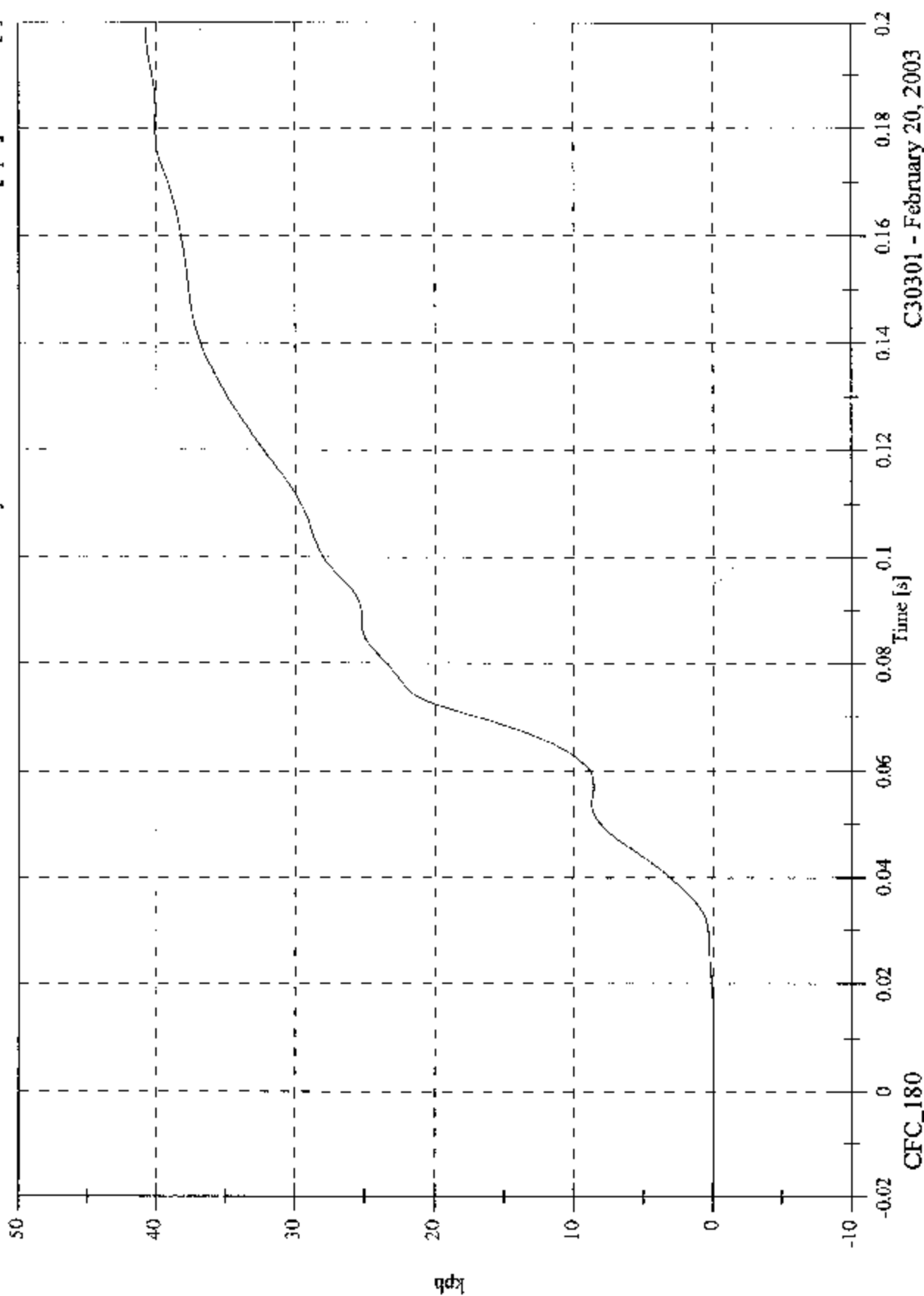


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 40.7 [kph] at 0.200 [s]
Min: -0.0 [kph] at 0.012 [s]

V2P1 Head z Velocity

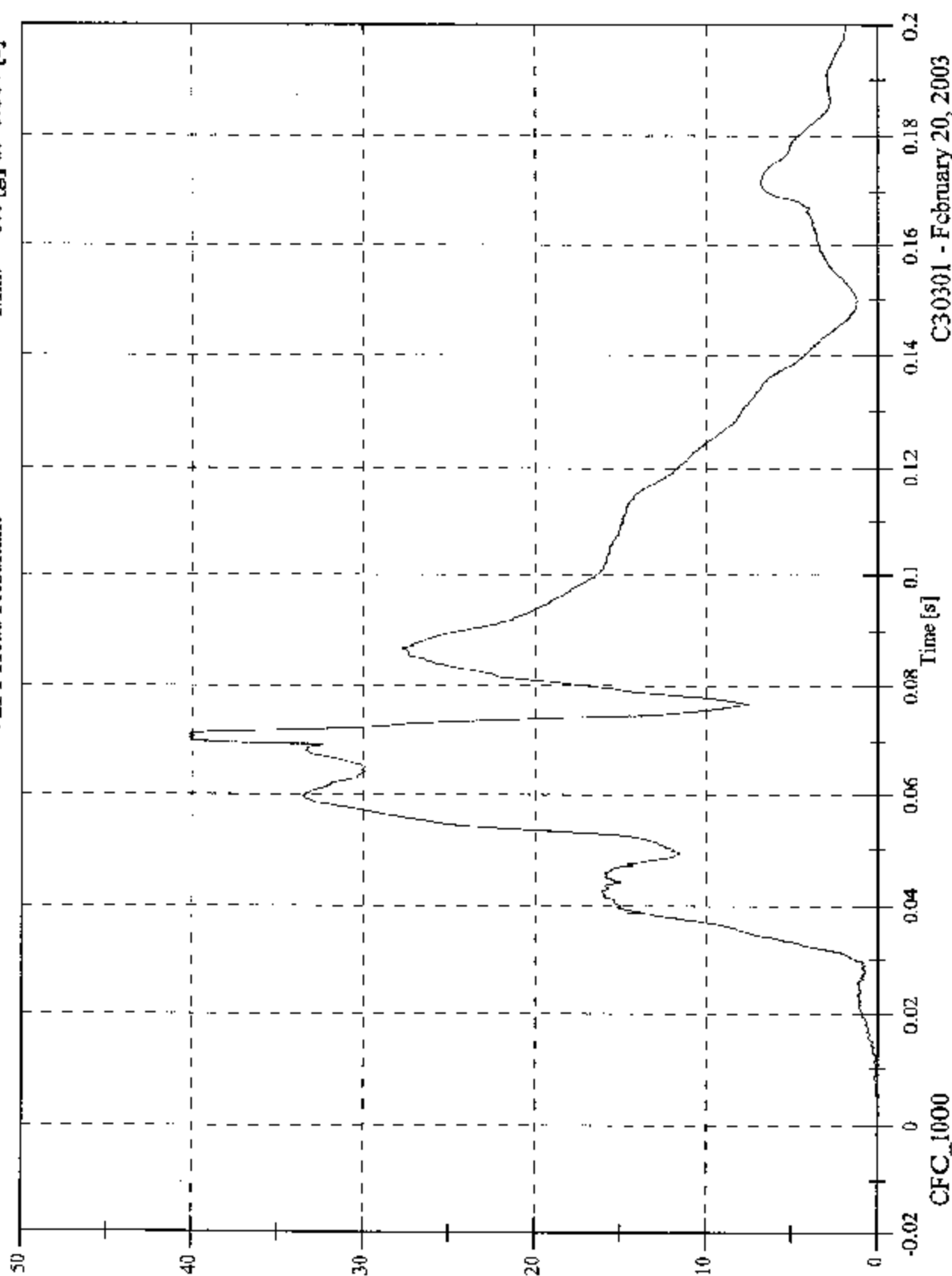


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2P1 Head Resultant

Max: 40.2 [g] at 0.071 [s]
Min: 0.0 [g] at -0.007 [s]

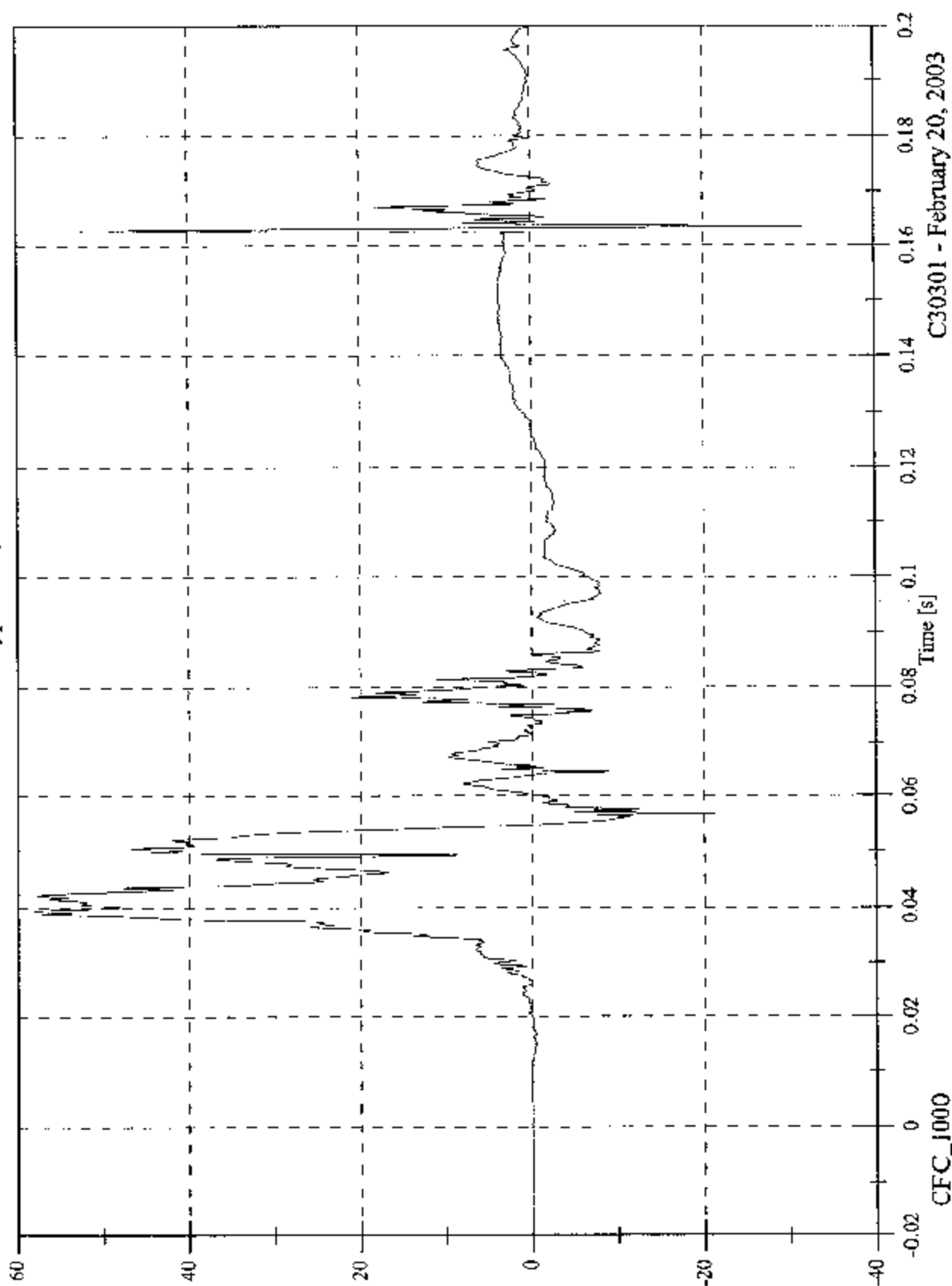


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2P1 Upper Rib y

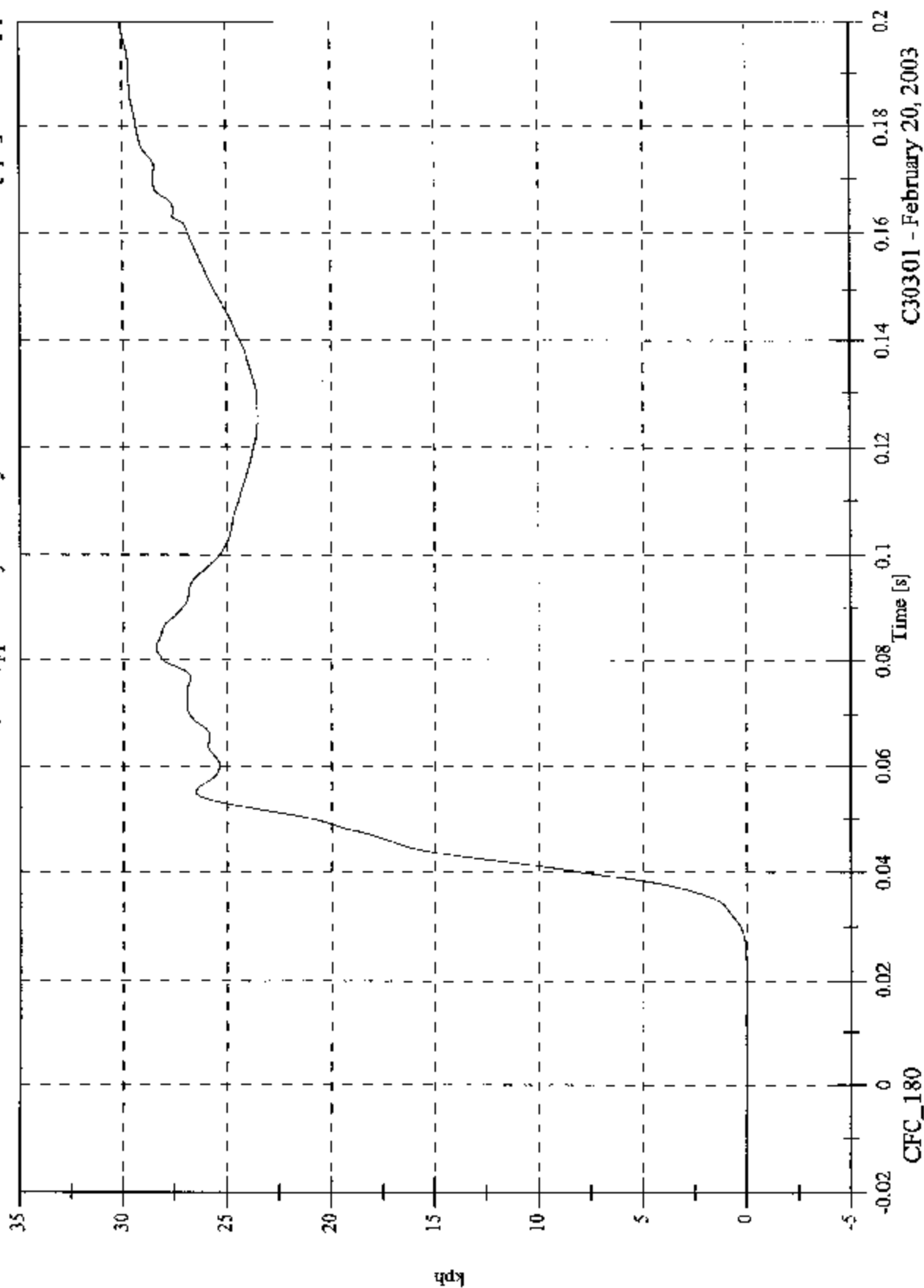
Max: 58.2 [g] at 0.039 [s]
Min: -31.7 [g] at 0.163 [s]



FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 30.1 [kph] at 0.200 [s]
Min: -0.0 [kph] at 0.019 [s]

V2PI Upper Rib y Velocity



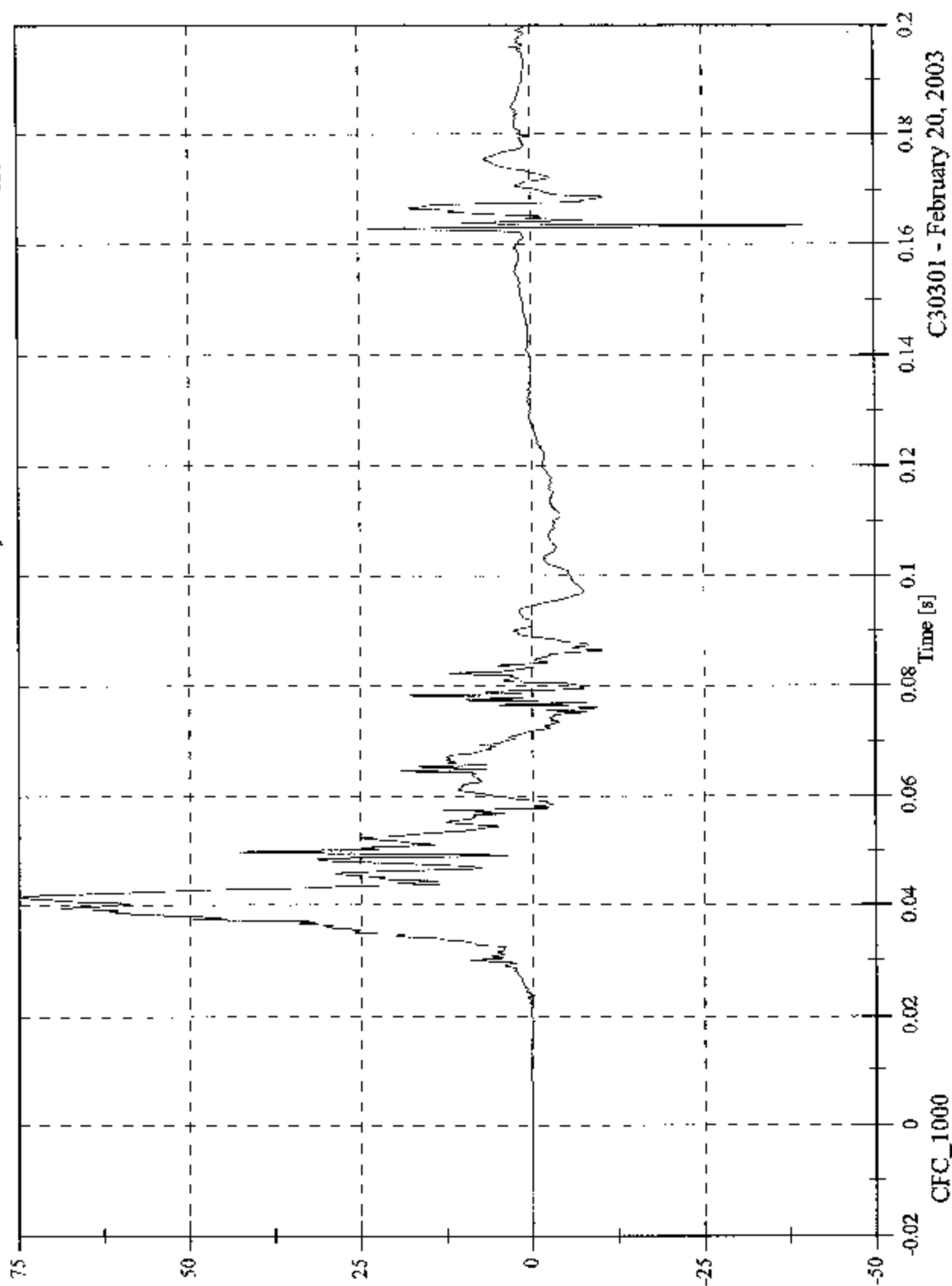
CFC_180

C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2P1 Lower Rib y

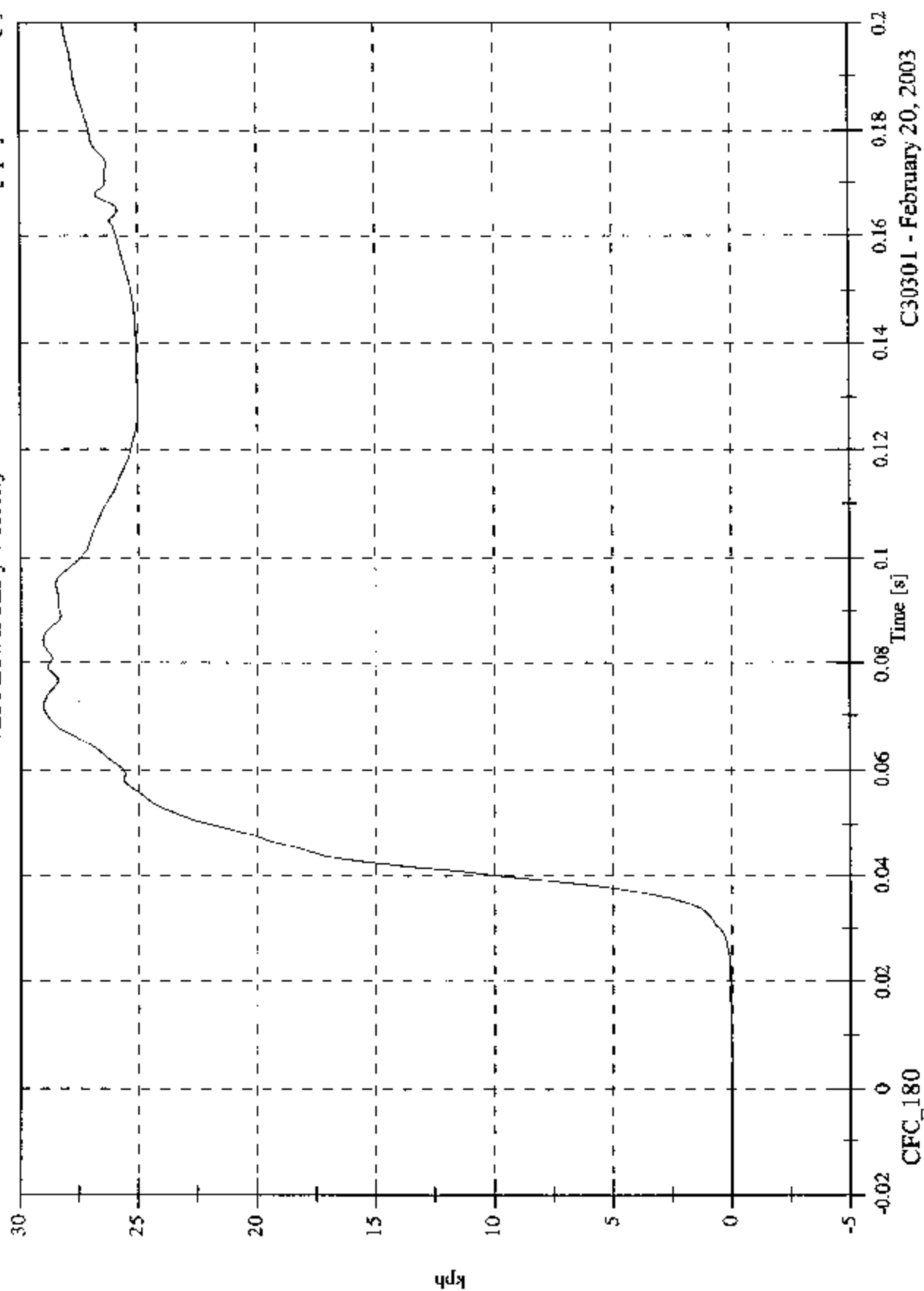
Max: 74.8 [g] at 0.041 [s]
Min: -39.7 [g] at 0.163 [s]



FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 29.1 [kph] at 0.072 [s]
Min: -0.0 [kph] at -0.020 [s]

V2P1 Lower Rib y Velocity

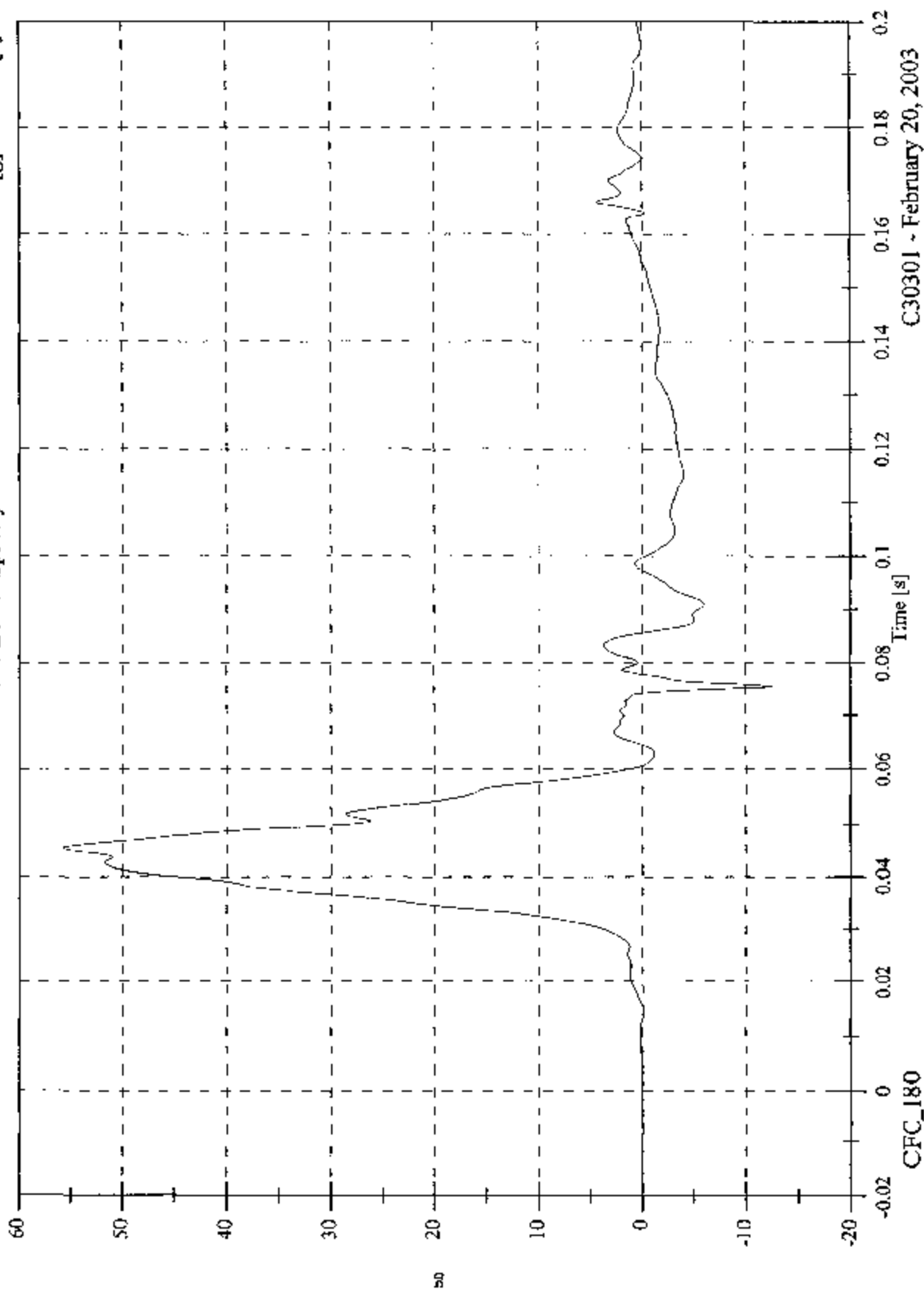


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 55.7 [g] at 0.045 [s]
Min: -12.6 [g] at 0.076 [s]

V2P1 Lower Spine y

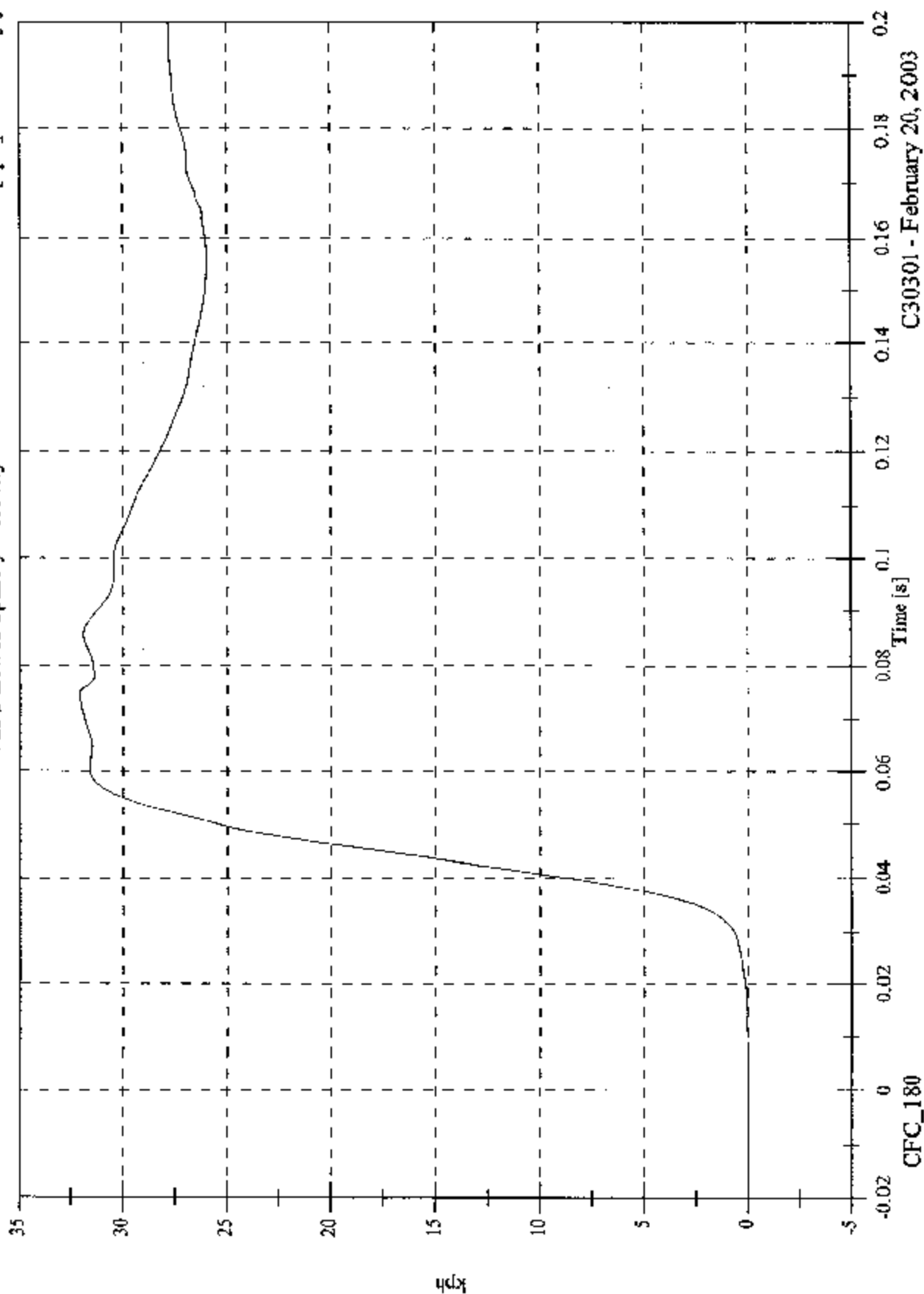


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 32.1 [kph] at 0.074 [s]
Min: -0.0 [kph] at -0.018 [s]

V2P1 Lower Spine y Velocity



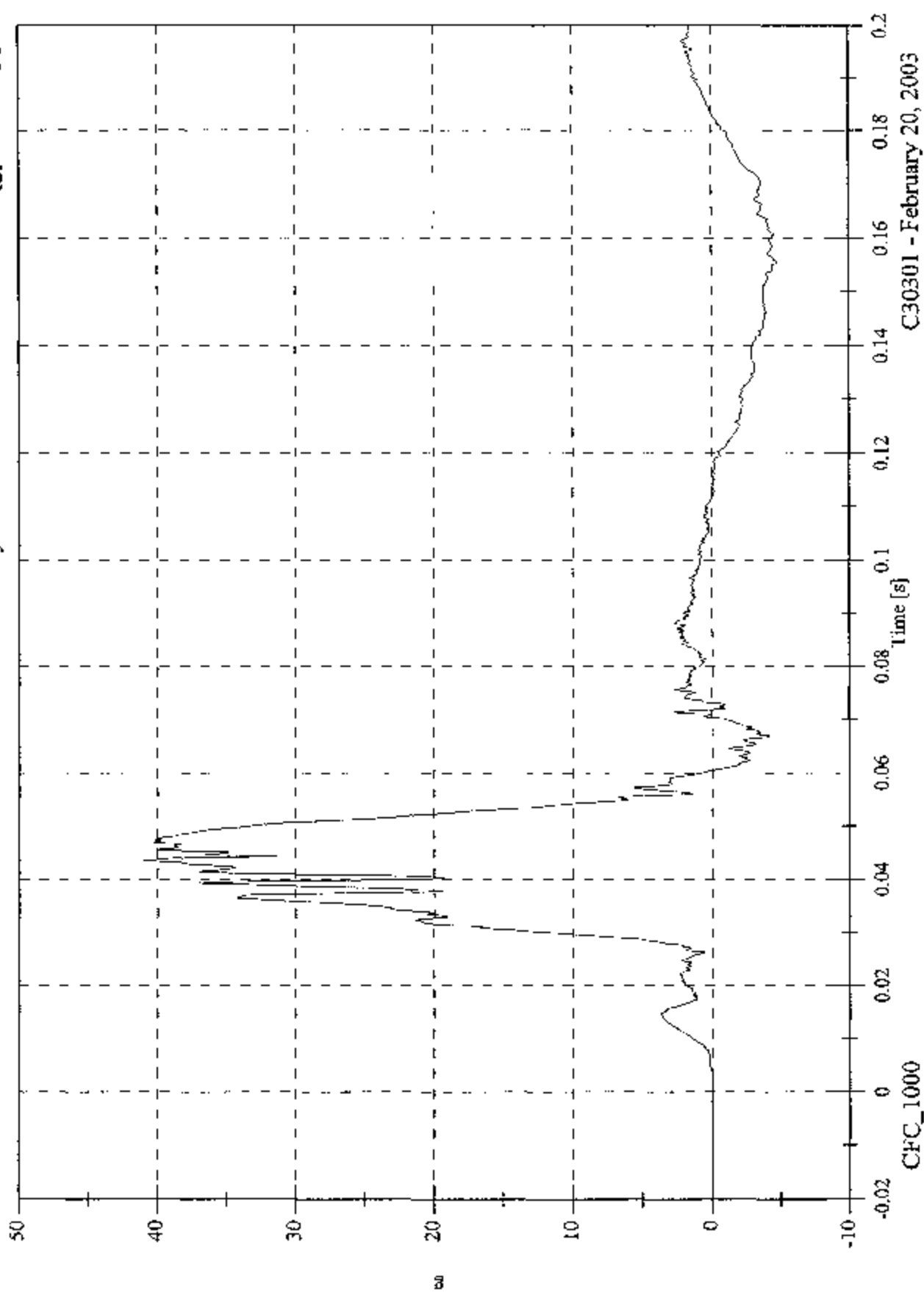
CFC_180

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FMVSS 214D - 2003 Chrysler PT Cruiser

V2P1 Pelvic y

Max: 41.0 [g] at 0.043 [s]
Min: -4.8 [g] at 0.156 [s]



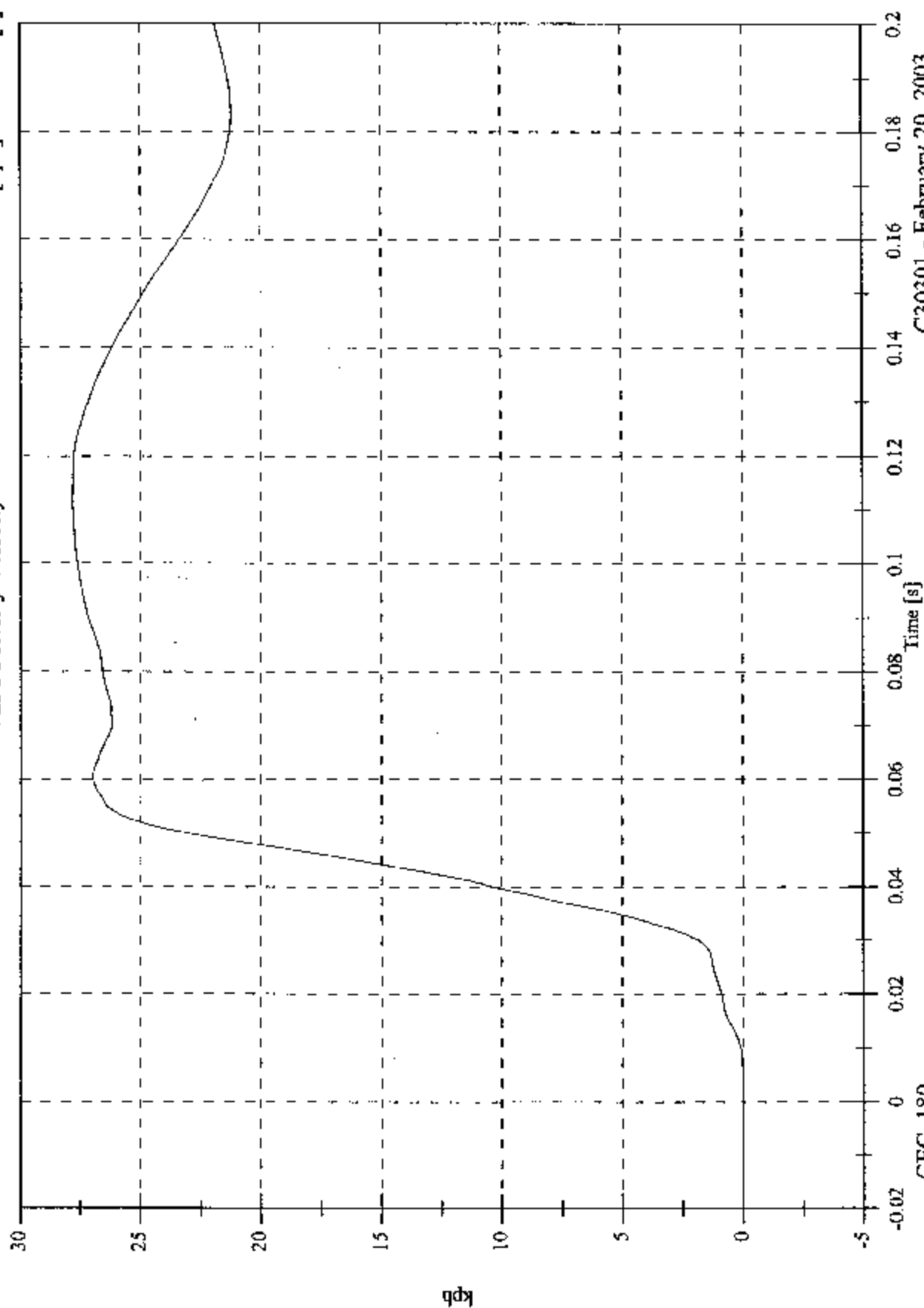
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 27.8 [kph] at 0.112 [s]

Min: -0.0 [kph] at -0.016 [s]

V2P1 Pelvic y Velocity

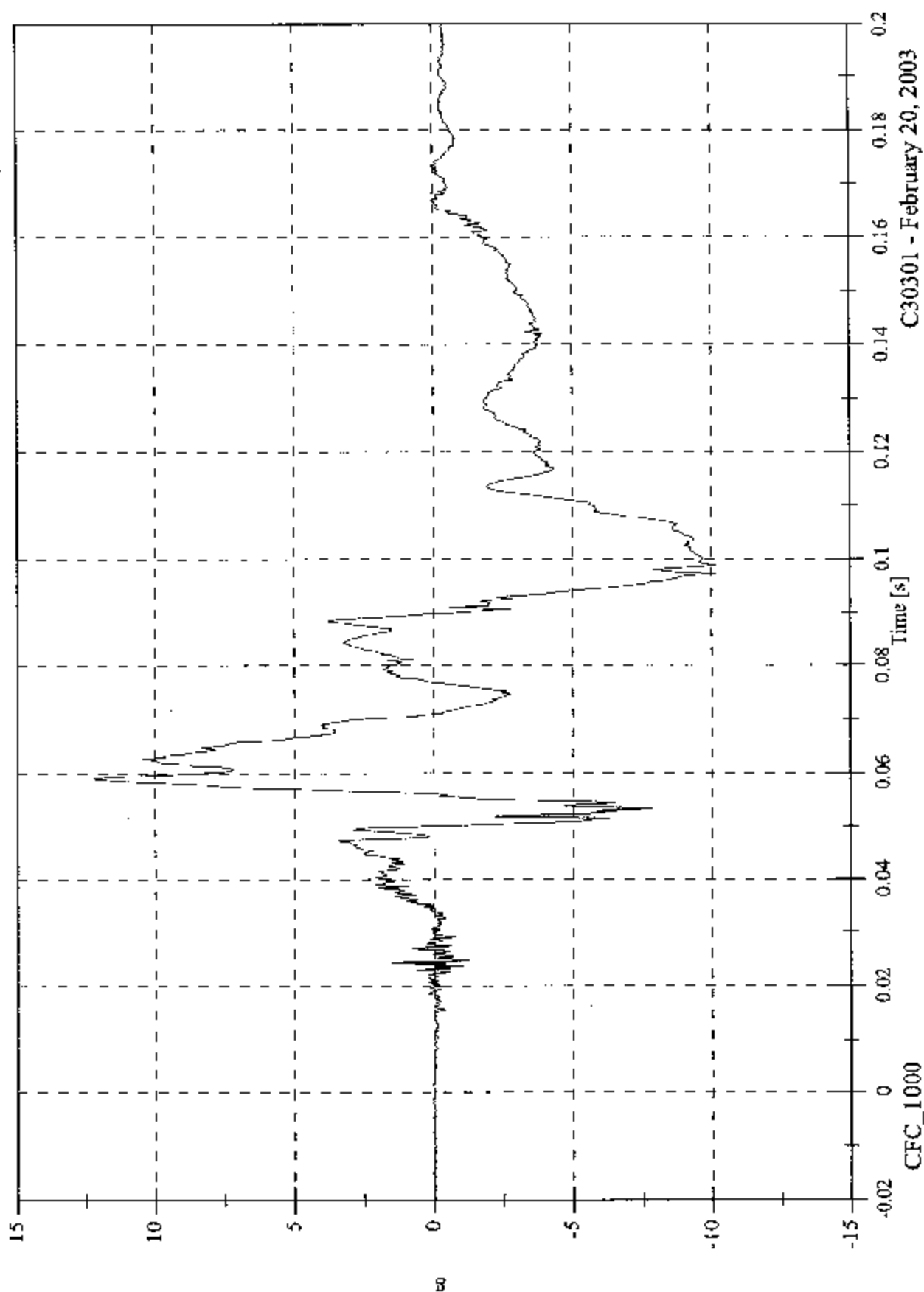


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 12.3 [g] at 0.059 [s]
Min: -10.2 [g] at 0.097 [s]

V2P4 Head x

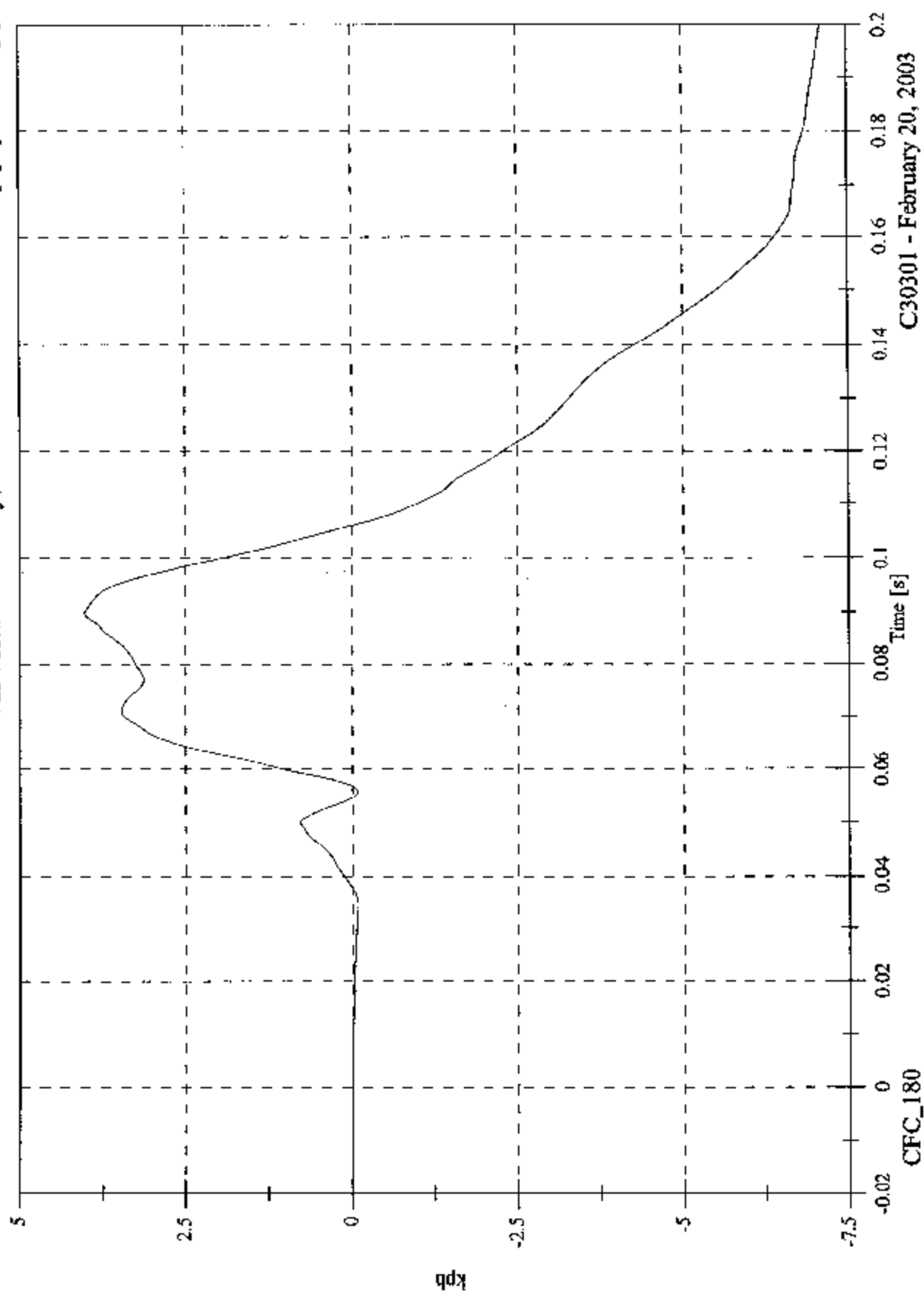


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 4.0 [kph] at 0.090 [s]
Min: -7.1 [kph] at 0.200 [s]

V2P4 Head x Velocity

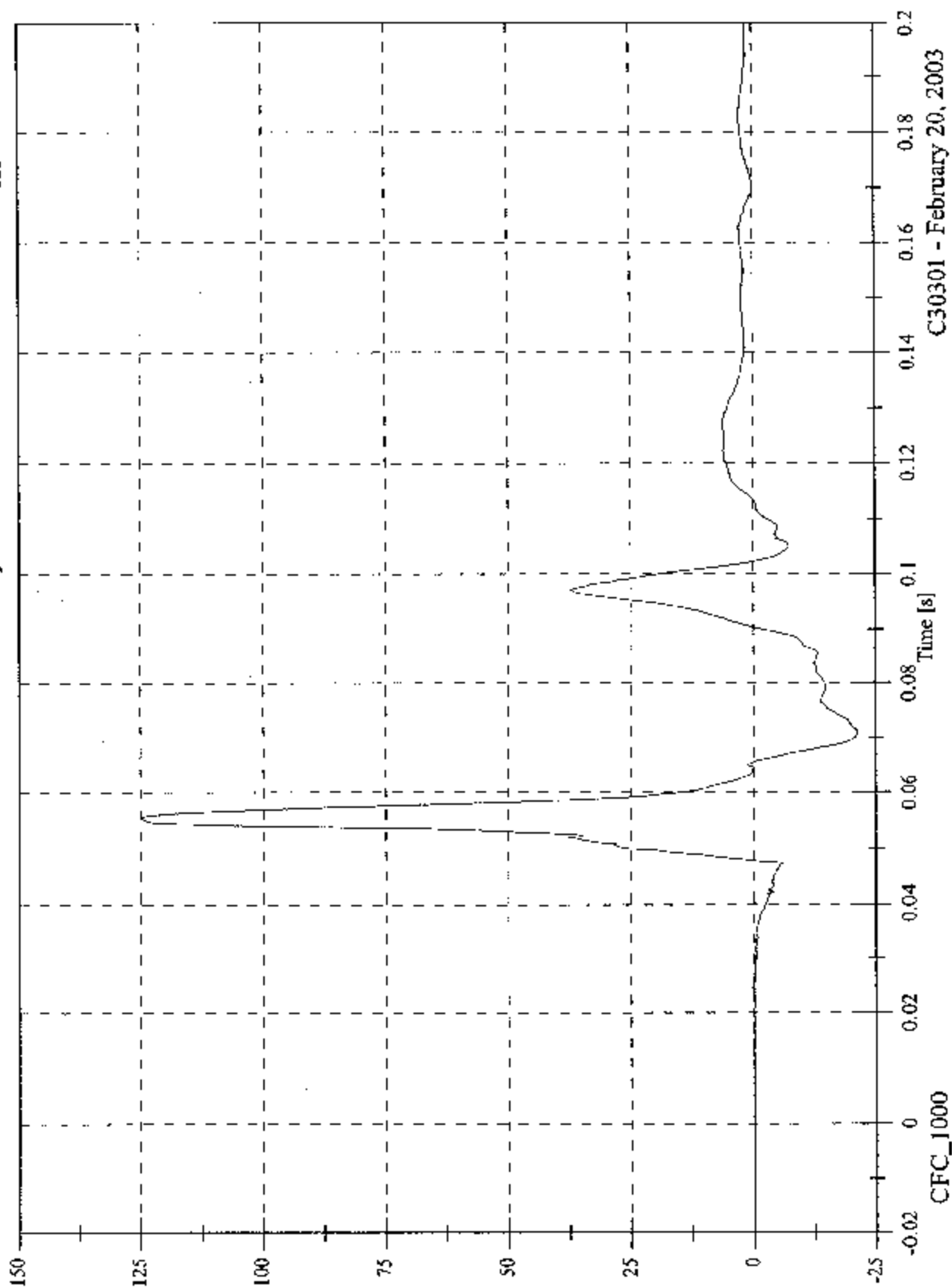


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FMVSS 214D - 2003 Chrysler PT Cruiser

V2P4 Head y

Max: 125.1 [g] at 0.056 [s]
Min: -21.2 [g] at 0.071 [s]



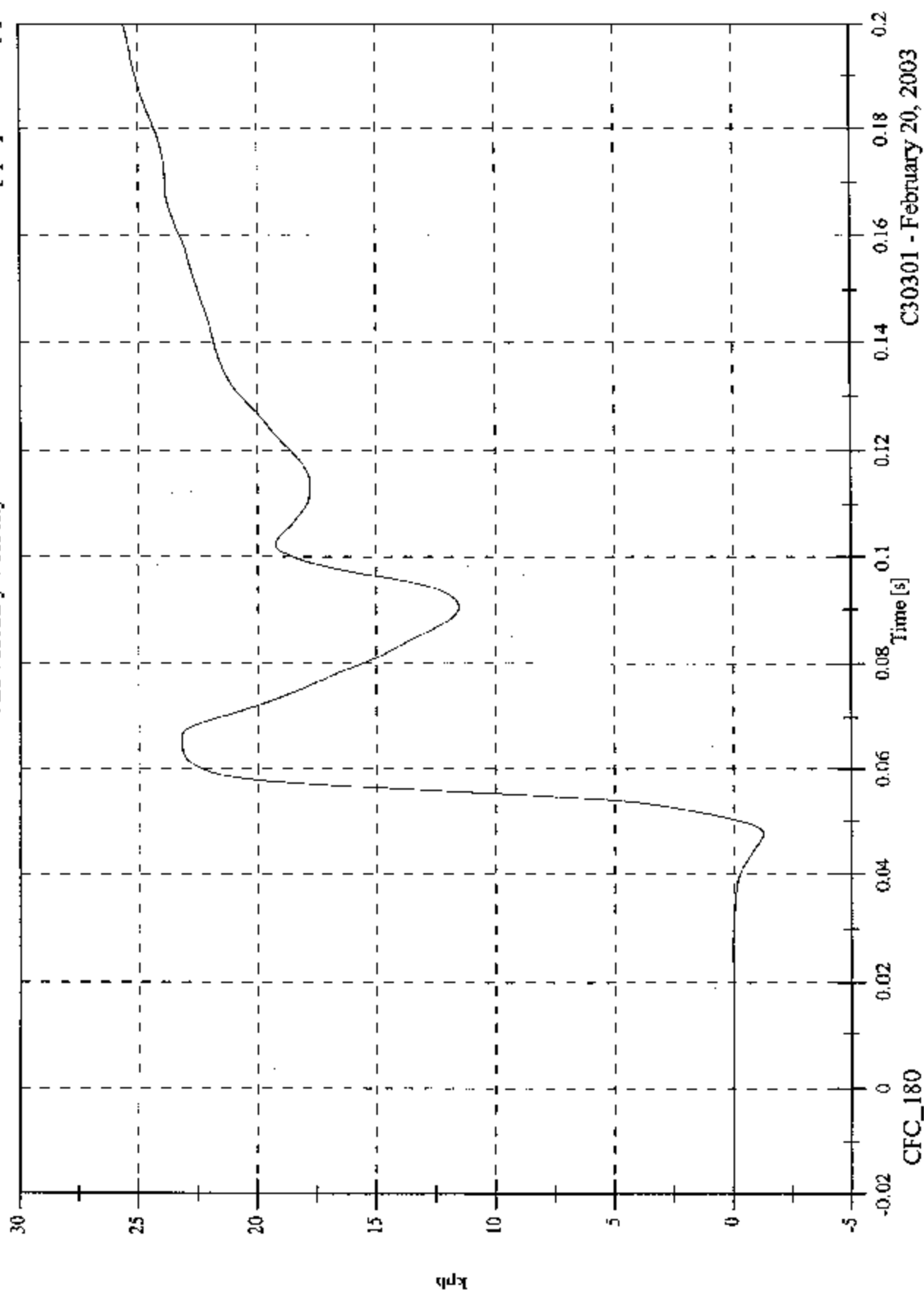
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 25.6 [kph] at 0.200 [s]

Min: -1.3 [kph] at 0.048 [s]

V2P4 Head y Velocity

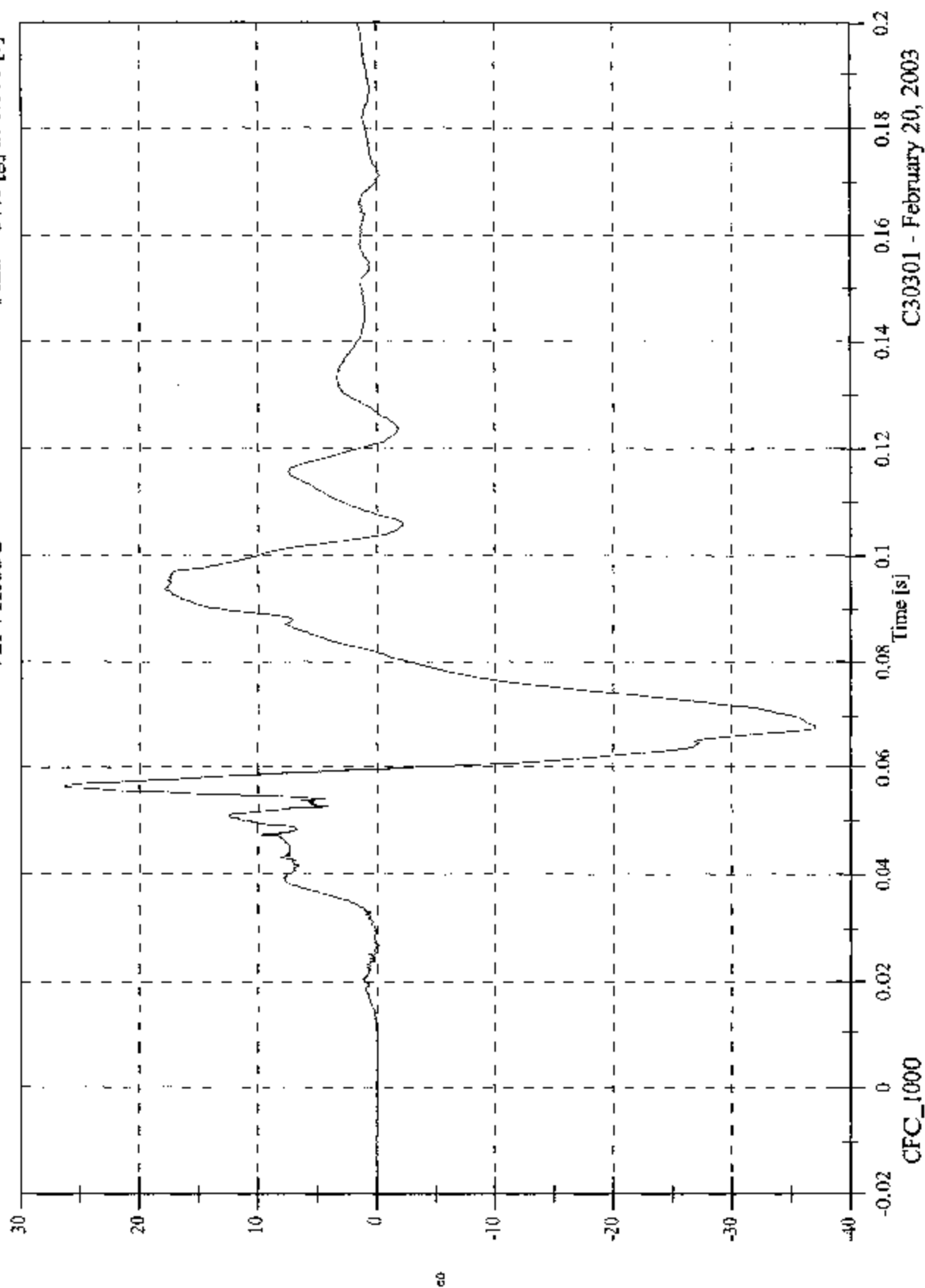


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2P4 Head z

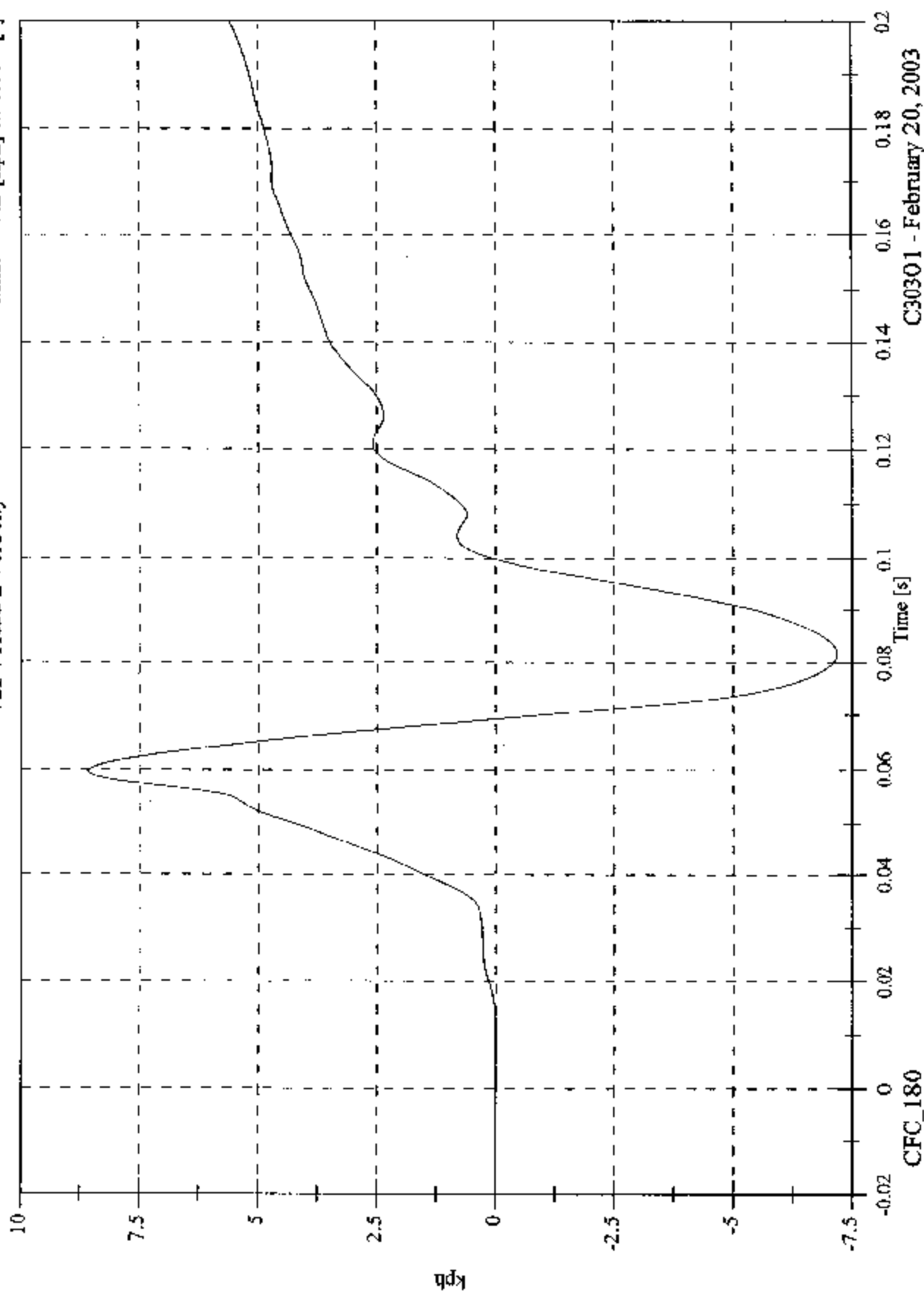
Max: 26.3 [g] at 0.057 [s]
Min: -37.0 [g] at 0.068 [s]



FMVSS 214D - 2003 Chrysler PT Cruiser

V2P4 Head z Velocity

Max: 8.6 [kph] at 0.060 [s]
Min: -7.2 [kph] at 0.082 [s]

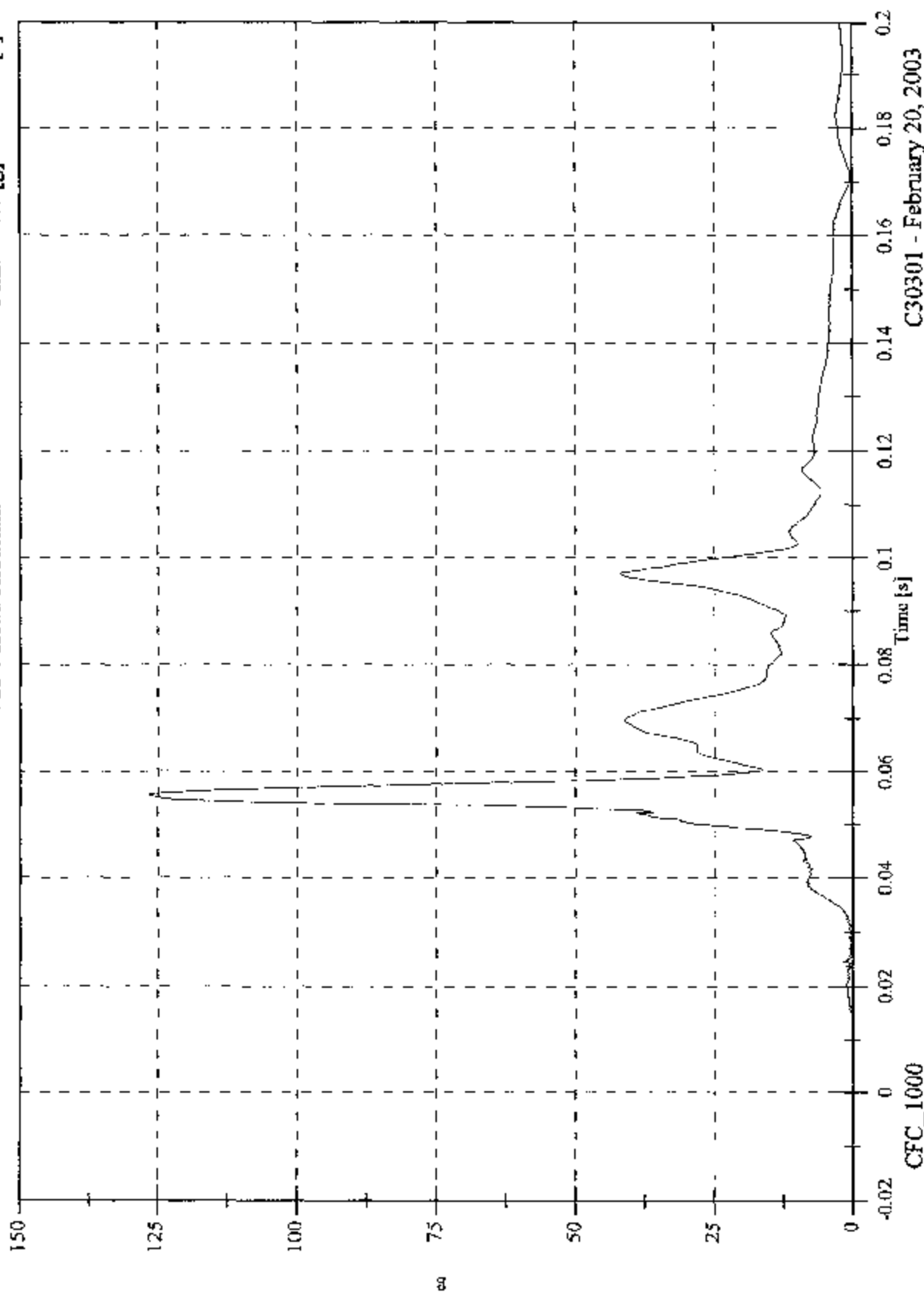


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2P4 Head Resultant

Max: 126.6 [g] at 0.056 [s]
Min: 0.0 [g] at -0.009 [s]

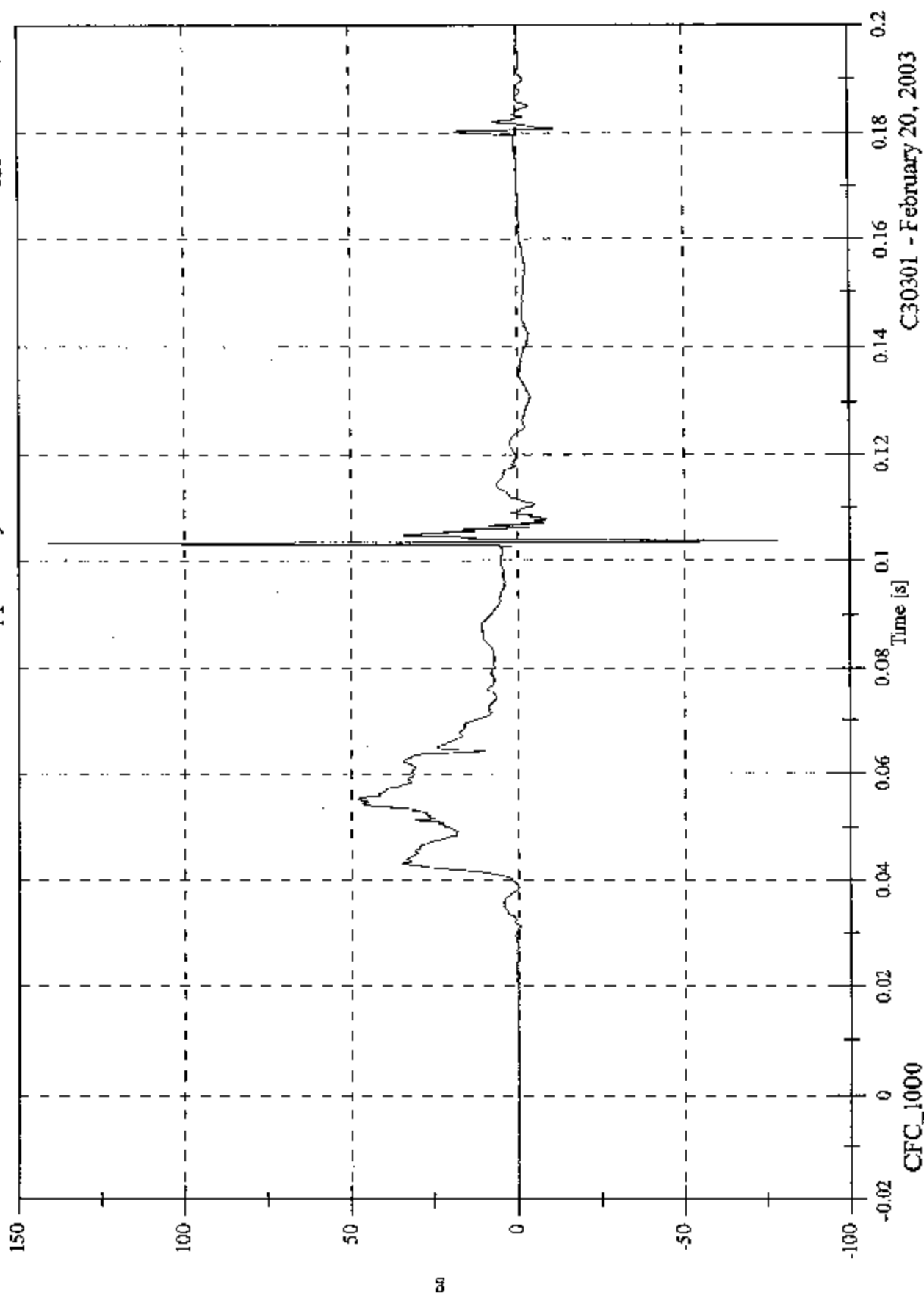


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2P4 Upper Rib y

Max: 140.9 [g] at 0.104 [s]
Min: -78.3 [g] at 0.104 [s]

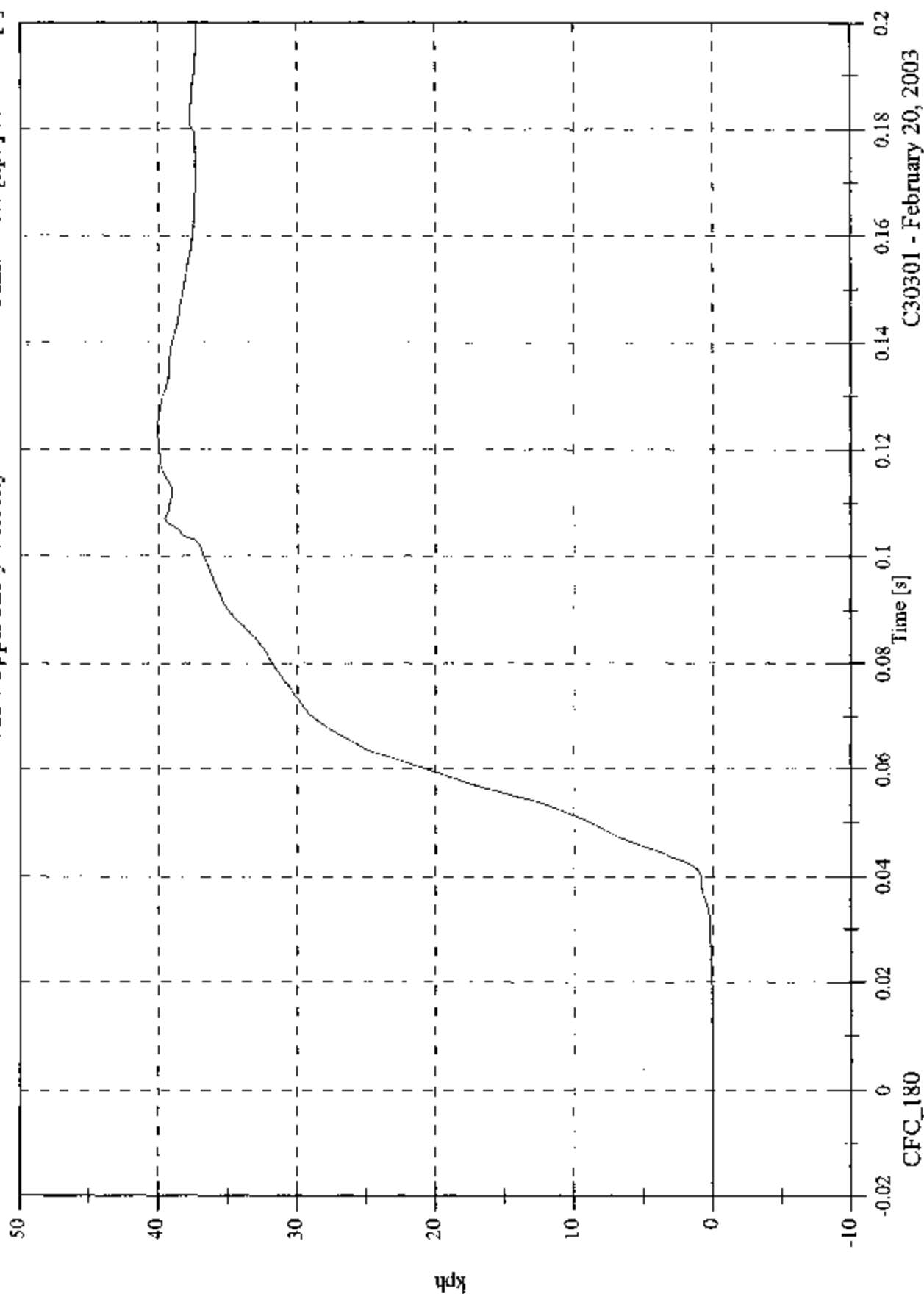


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2P4 Upper Rib y Velocity

Max: 40.1 [kph] at 0.124 [s]
Min: -0.0 [kph] at -0.015 [s]

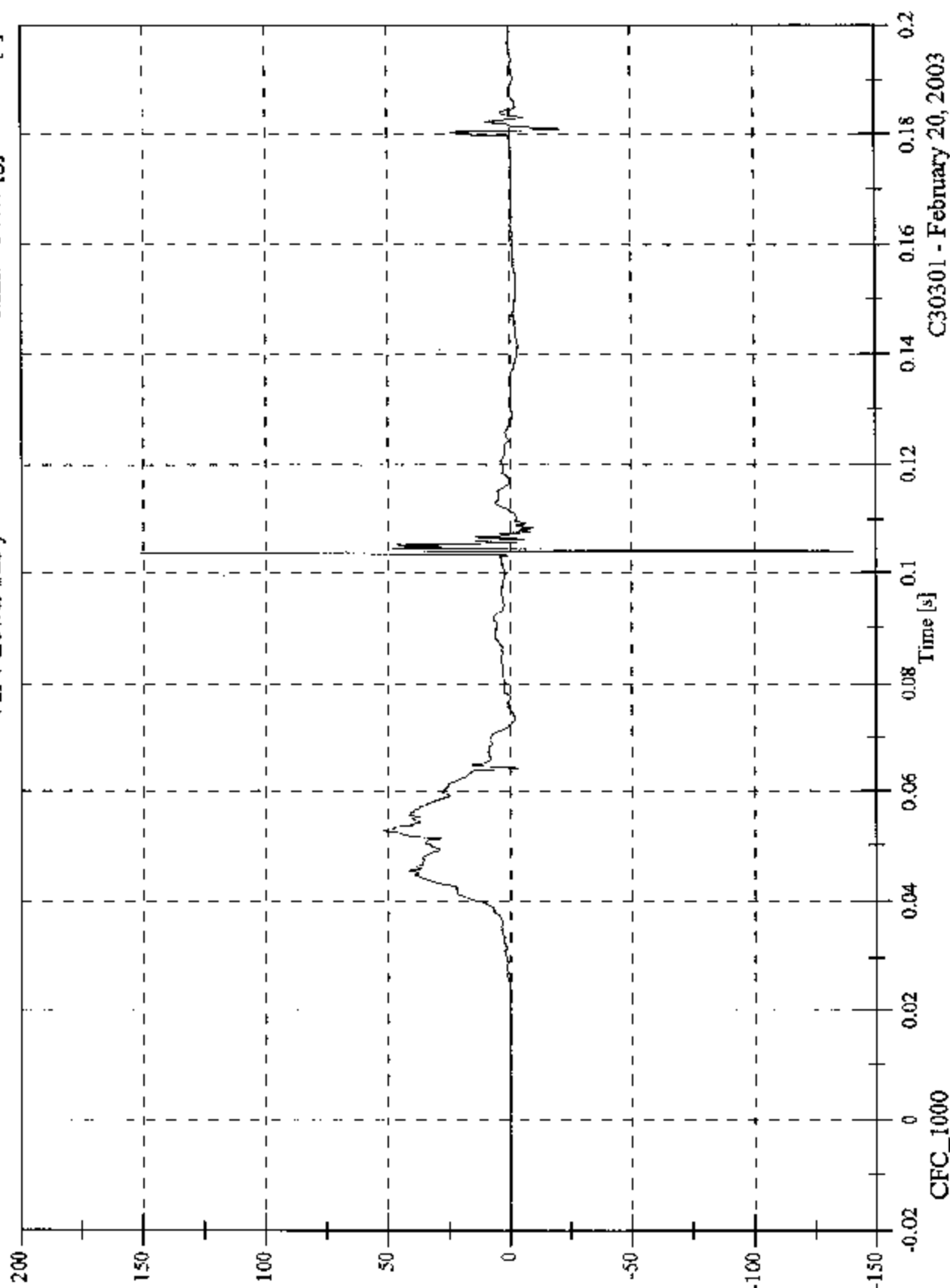


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2P4 Lower Rib y

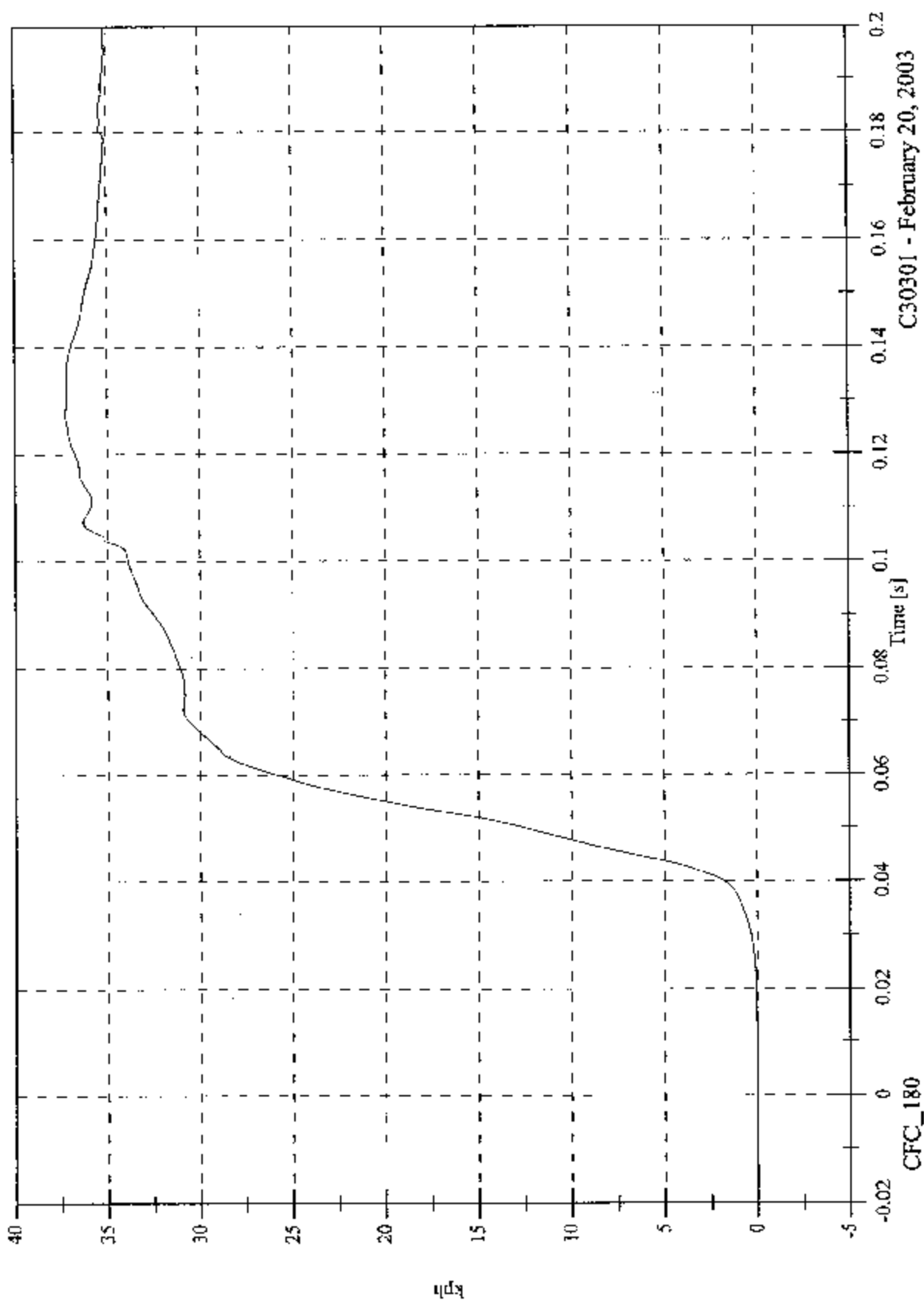
Max: 151.2 [g] at 0.104 [s]
Min: -140.8 [g] at 0.104 [s]



FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 37.3 [kph] at 0.128 [s]
Min: -0.0 [kph] at -0.020 [s]

V2P4 Lower Rib y Velocity

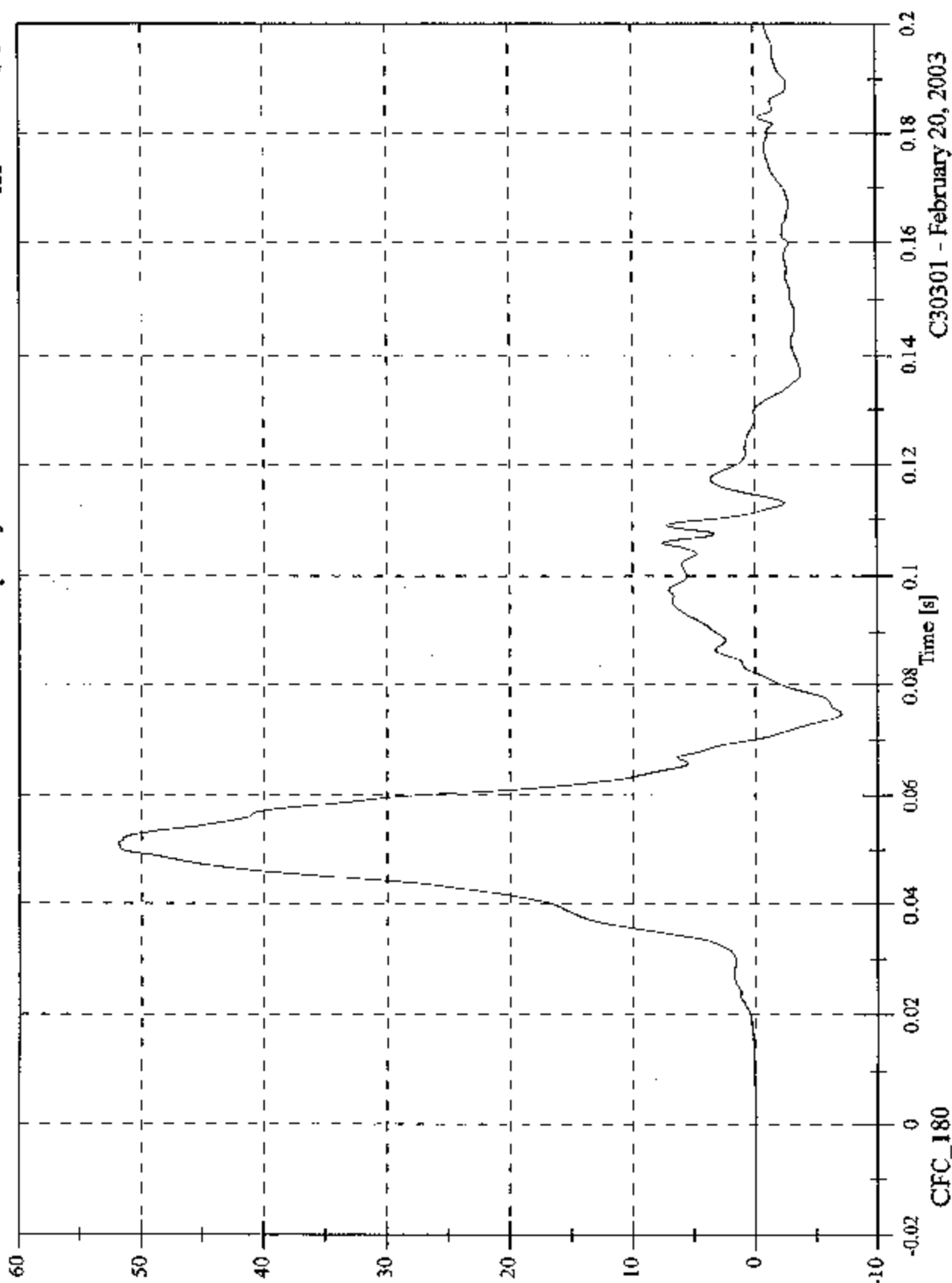


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FMVSS 214D - 2003 Chrysler PT Cruiser

V2P4 Lower Spine y

Max: 51.9 [g] at 0.051 [s]
Min: -7.1 [g] at 0.075 [s]

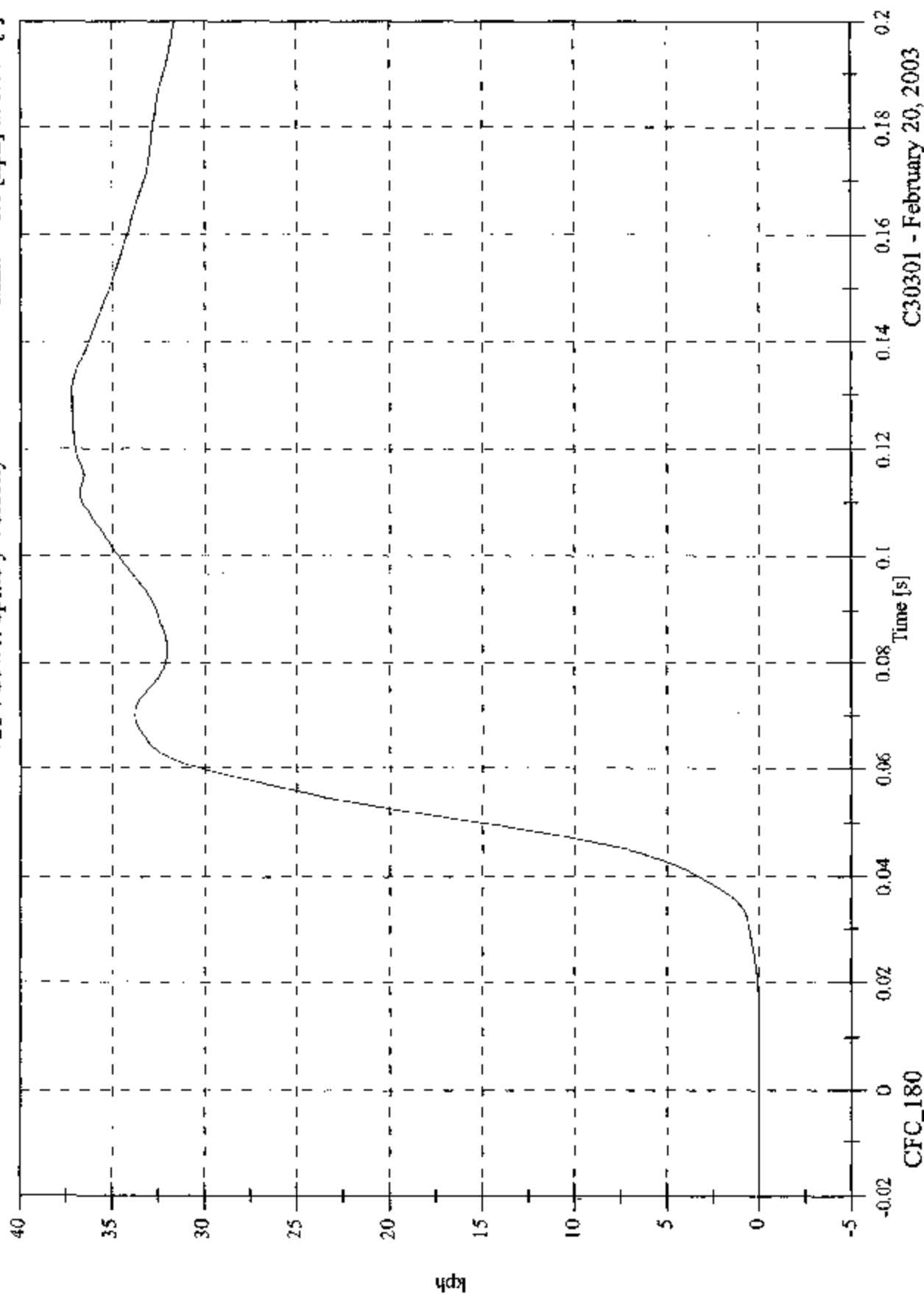


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 37.2 [kph] at 0.130 [s]
Min: -0.0 [kph] at 0.003 [s]

V2P4 Lower Spine y Velocity

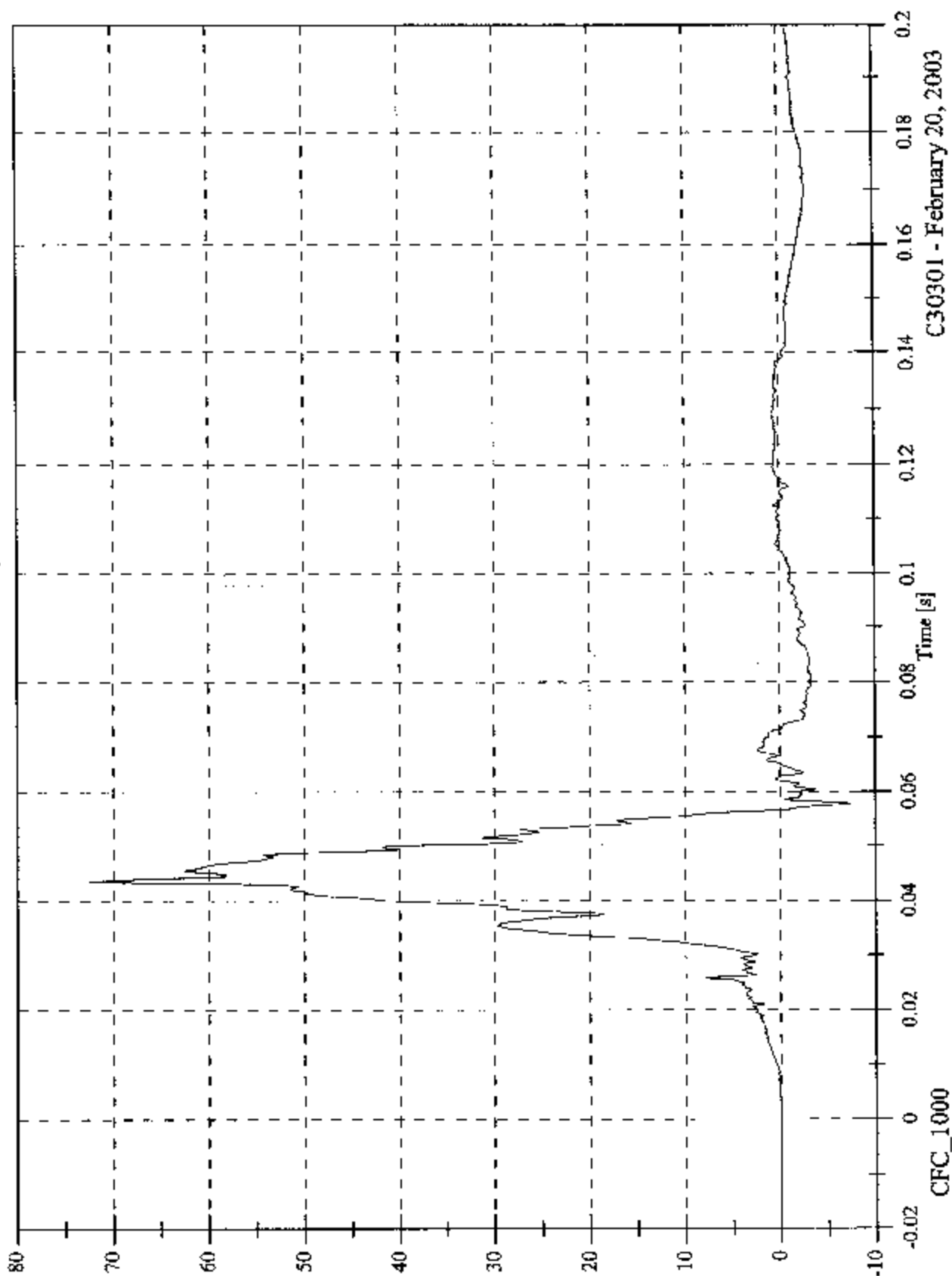


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 72.4 [g] at 0.044 [s]
Min: -7.3 [g] at 0.058 [s]

V2P4 Pelvic y

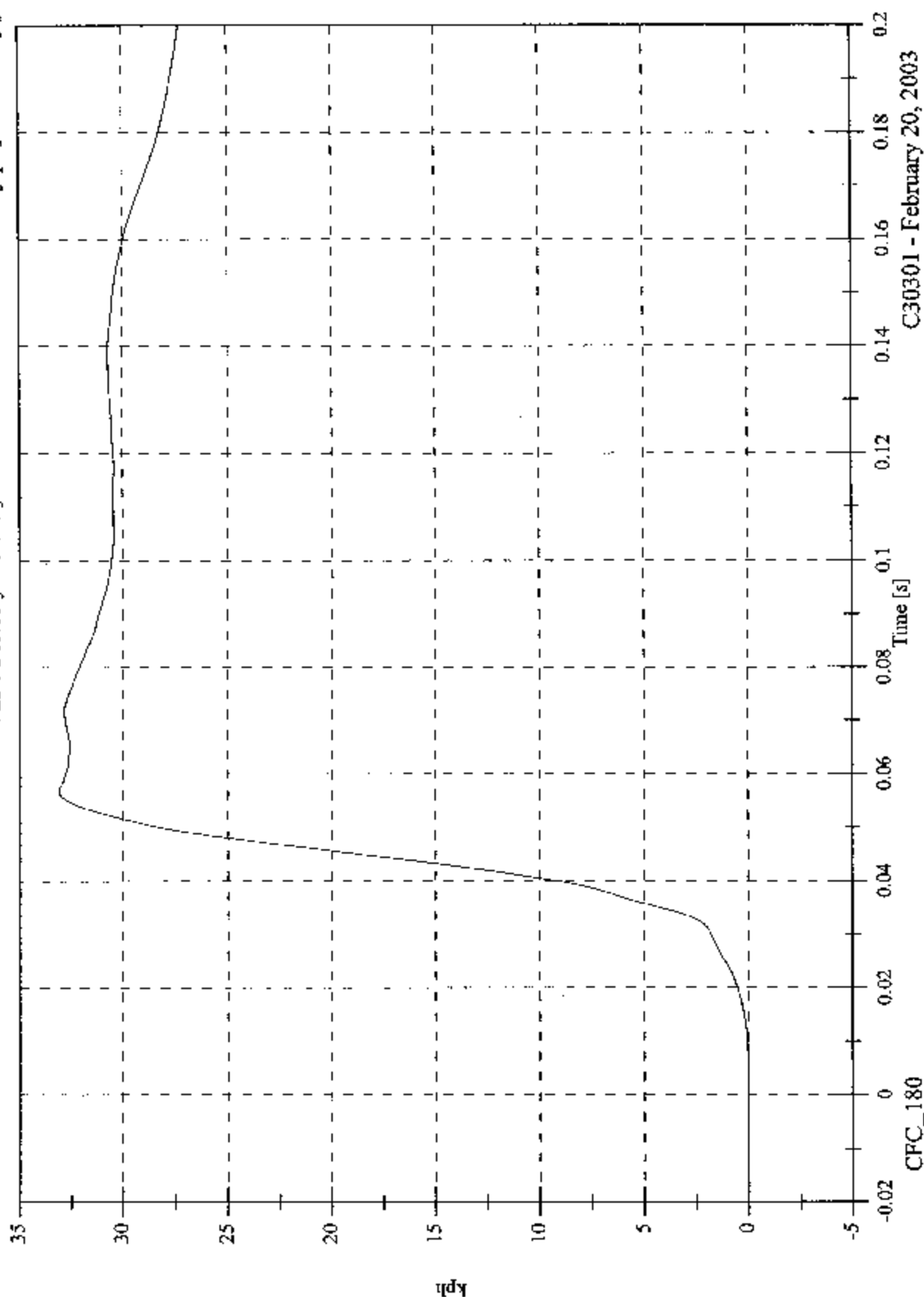


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 33.1 [kph] at 0.057 [s]
Min: -0.0 [kph] at -0.018 [s]

V2P4 Pelvic y Velocity



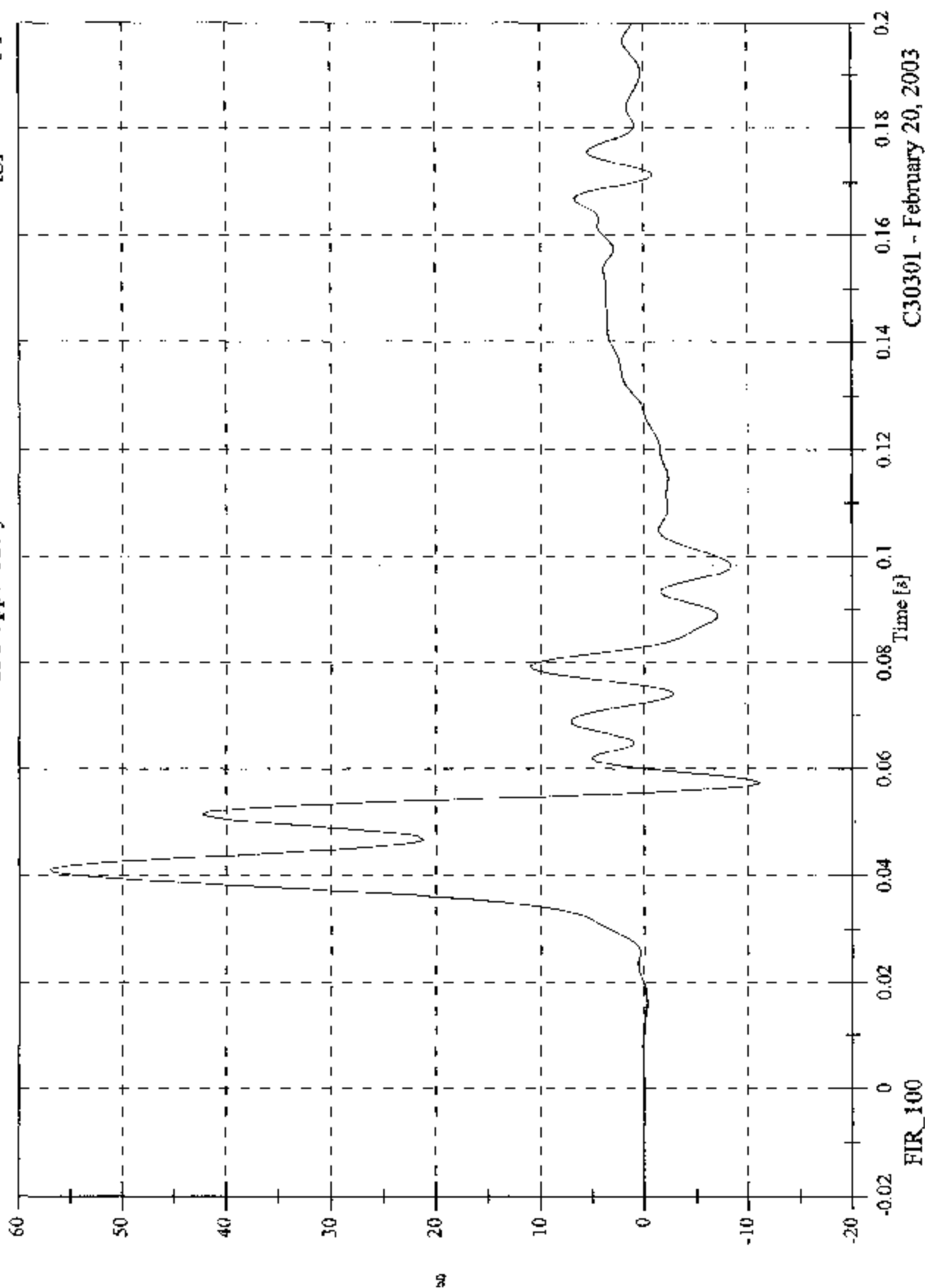
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2P1 Upper Rib y

Max: 57.0 [g] at 0.041 [s]

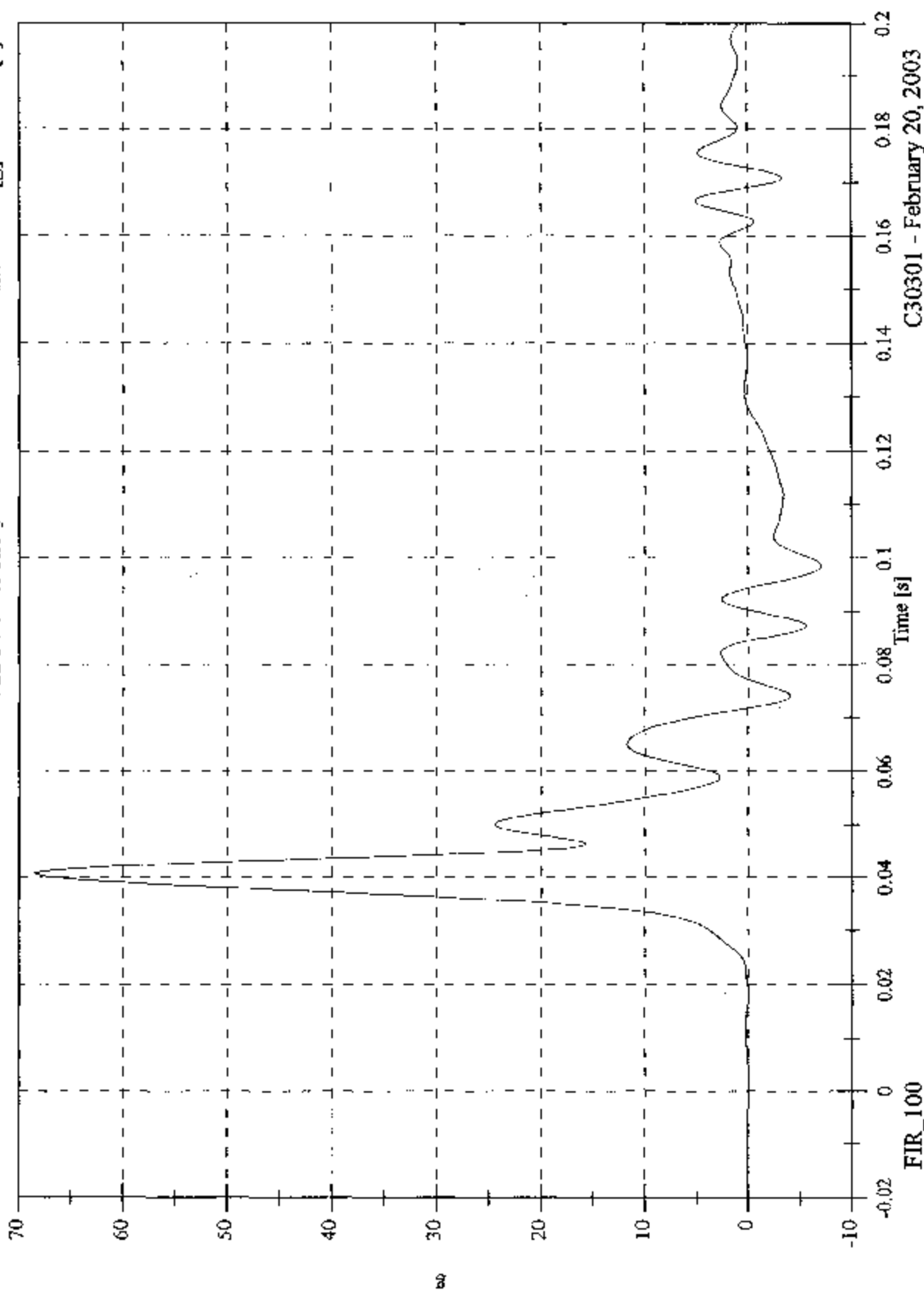
Min: -11.2 [g] at 0.057 [s]



FMVSS 214D - 2003 Chrysler PT Cruiser

V2P1 Lower Rib y

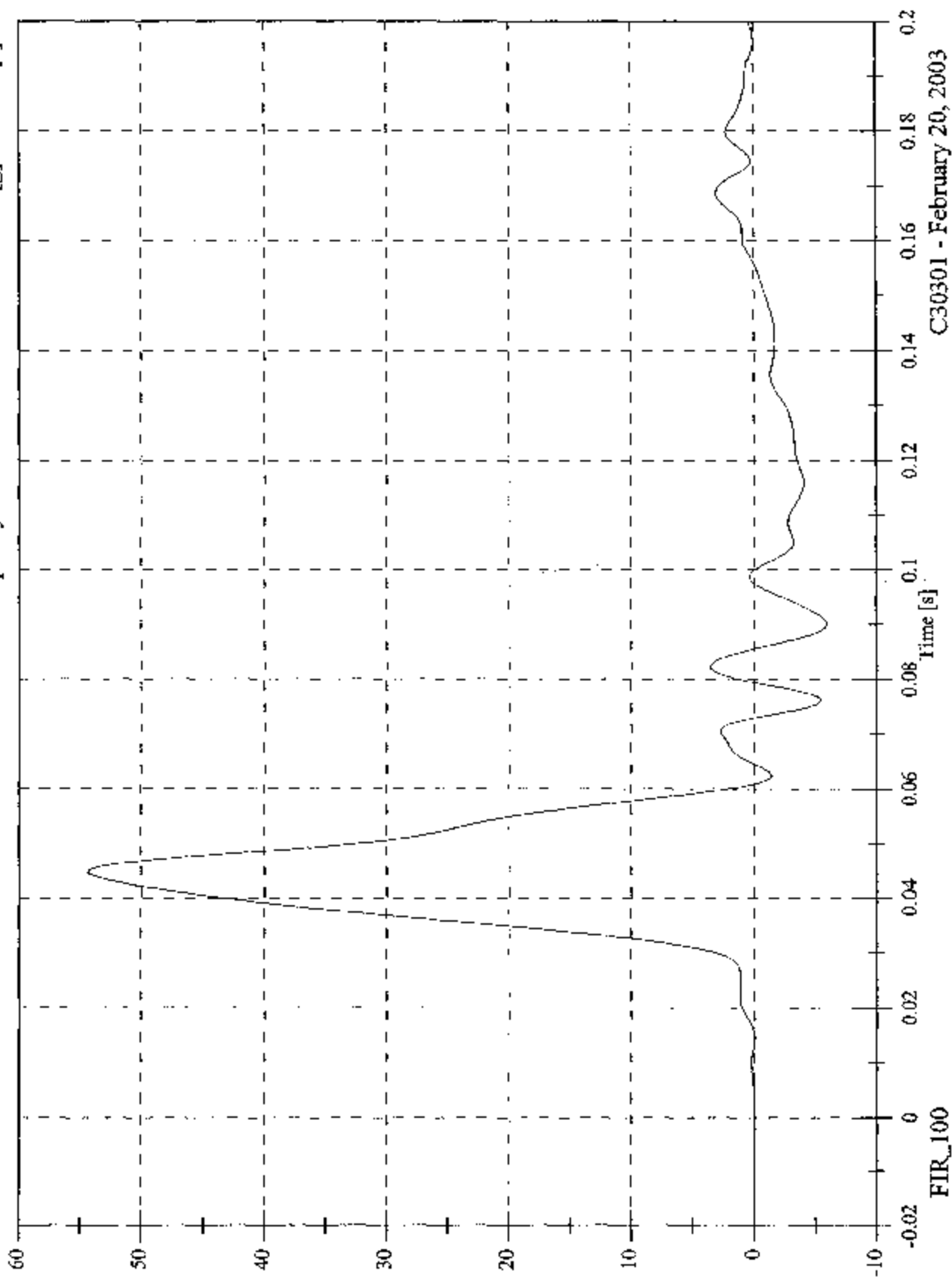
Max: 68.5 [g] at 0.041 [s]
Min: -7.0 [g] at 0.099 [s]



FMVSS 214D - 2003 Chrysler PT Cruiser

V2P1 Lower Spine y

Max: 54.3 [g] at 0.044 [s]
Min: -5.9 [g] at 0.090 [s]

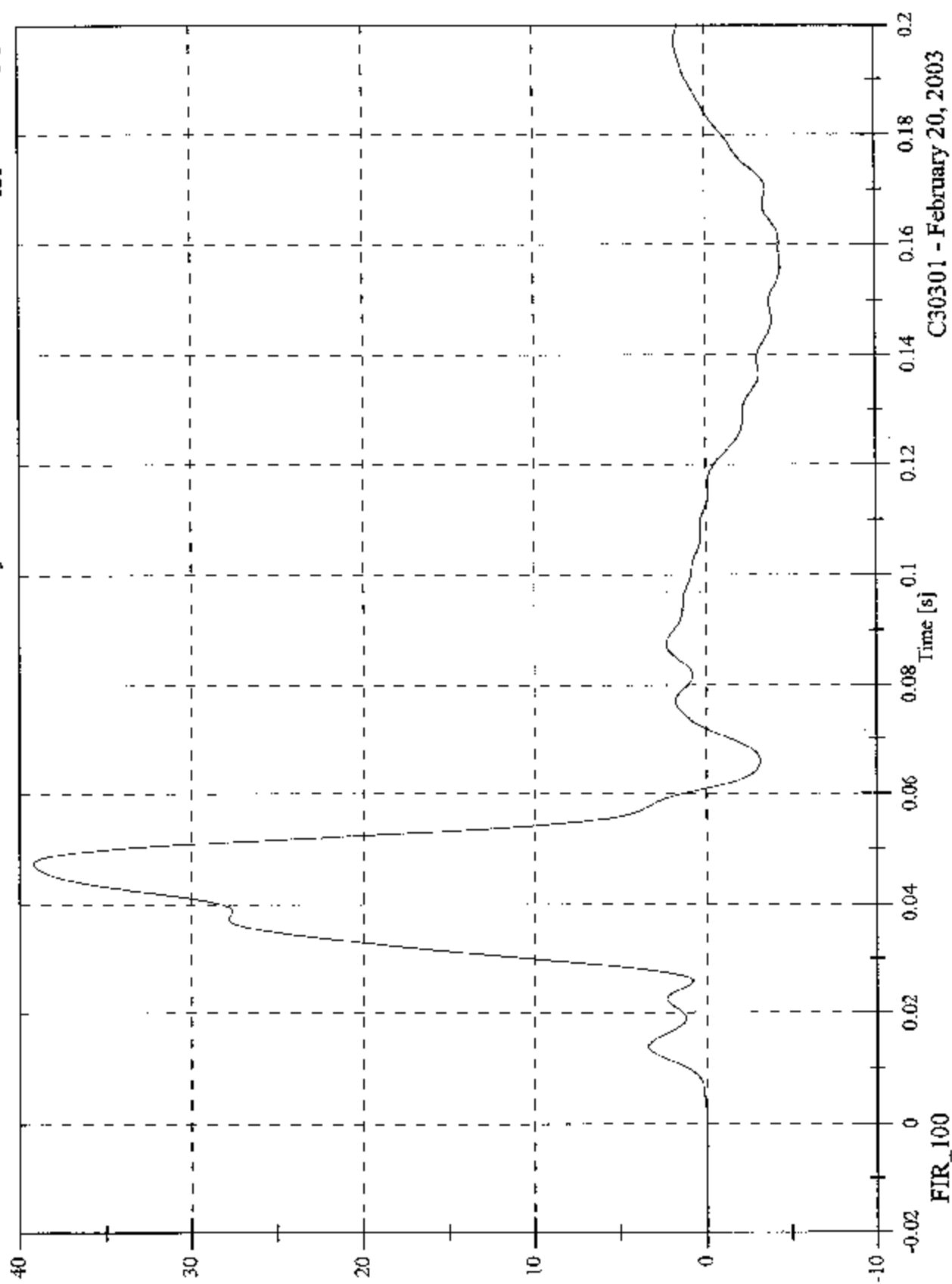


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 39.2 [g] at 0.048 [s]
Min: -4.4 [g] at 0.156 [s]

V2P1 Pelvic y

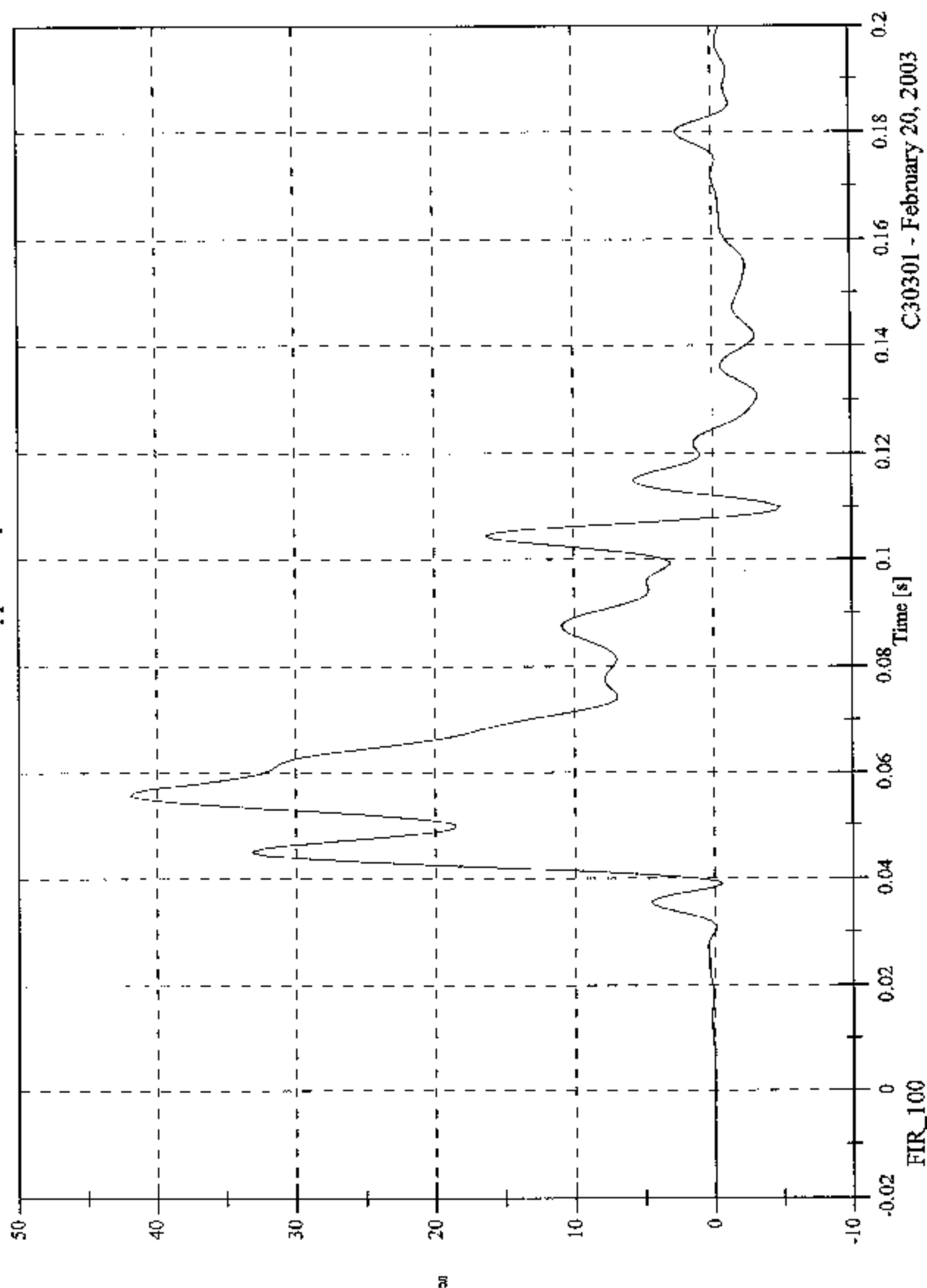


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FMVSS 214D - 2003 Chrysler PT Cruiser

V2P4 Upper Rib y

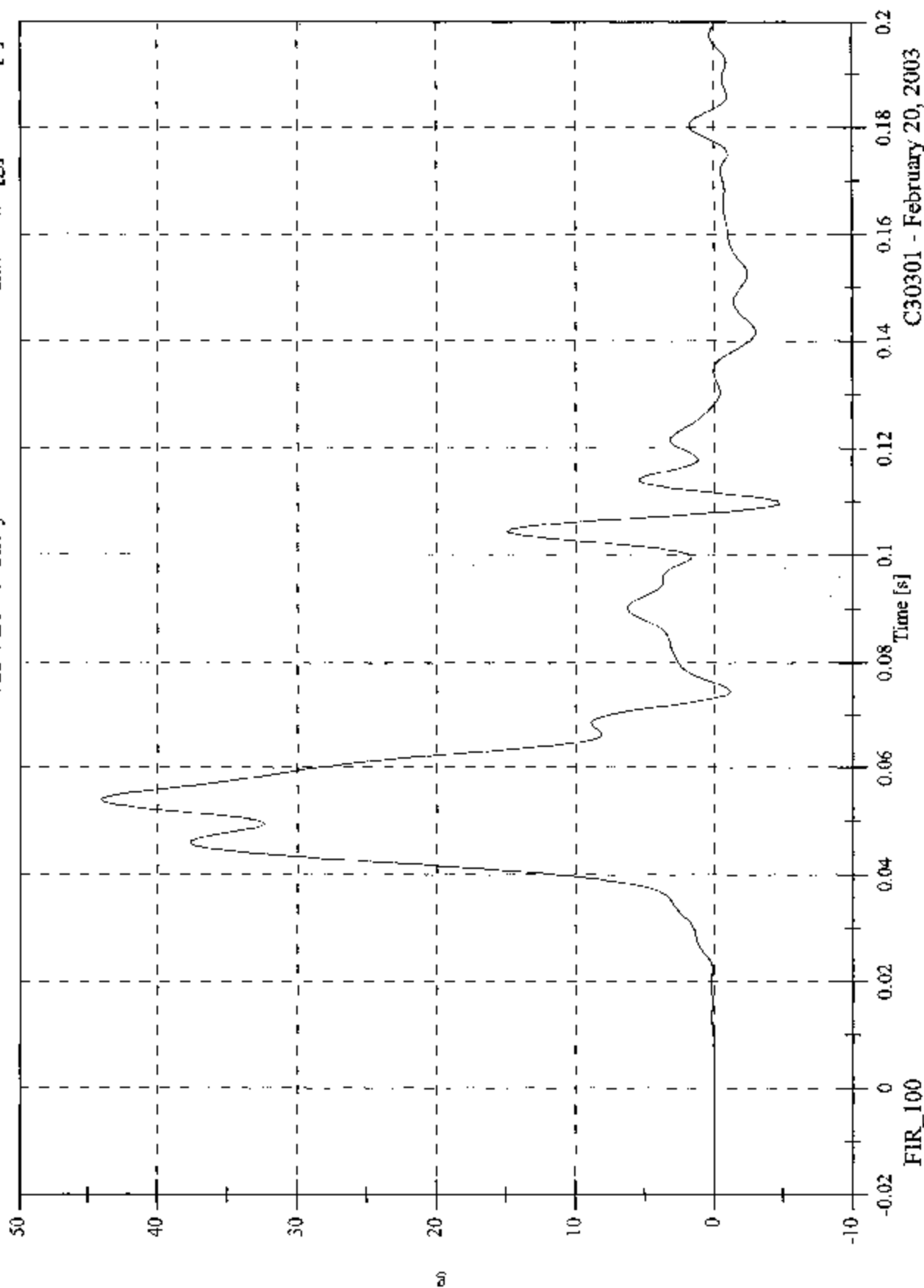
Max: 41.9 [g] at 0.056 [s]
Min: -4.8 [g] at 0.110 [s]



FMVSS 214D - 2003 Chrysler PT Cruiser

V2P4 Lower Rib y

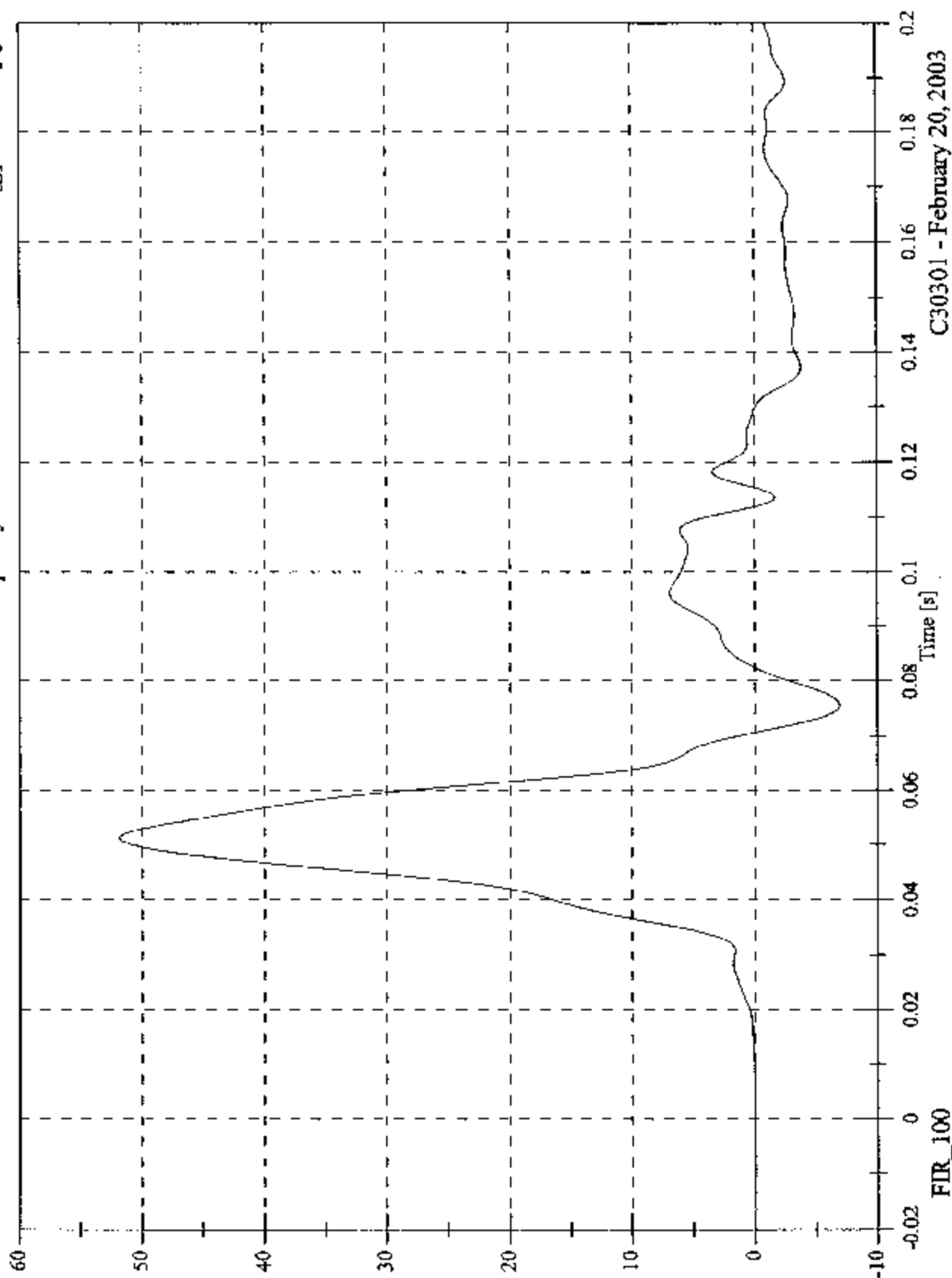
Max: 44.1 [g] at 0.054 [s]
Min: -4.7 [g] at 0.109 [s]



FMVSS 214D - 2003 Chrysler PT Cruiser

V2P4 Lower Spine y

Max: 51.9 [g] at 0.051 [s]
Min: -6.9 [g] at 0.076 [s]

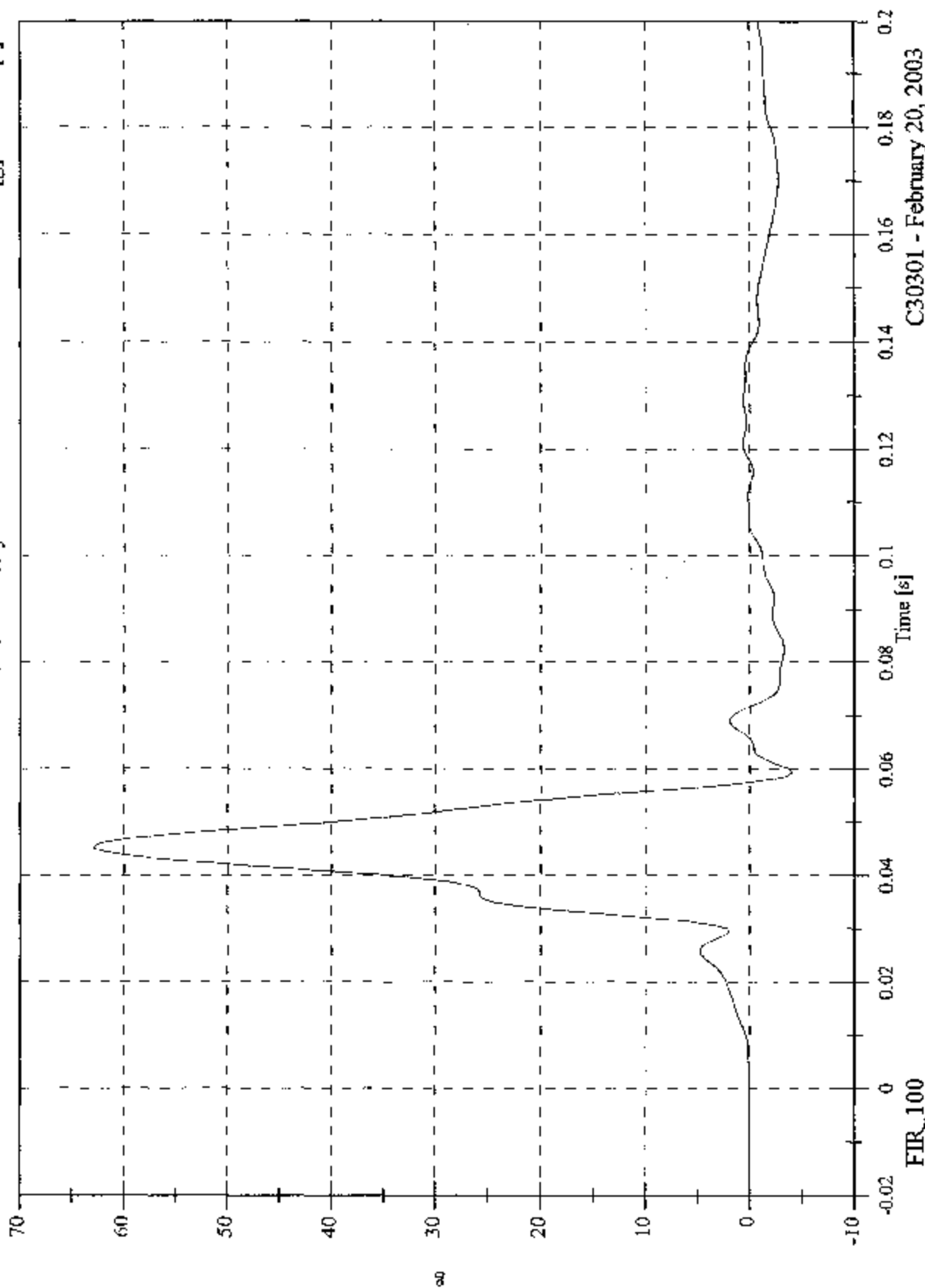


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FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 62.8 [g] at 0.045 [s]
Min: -4.0 [g] at 0.059 [s]

V2P4 Pelvic y



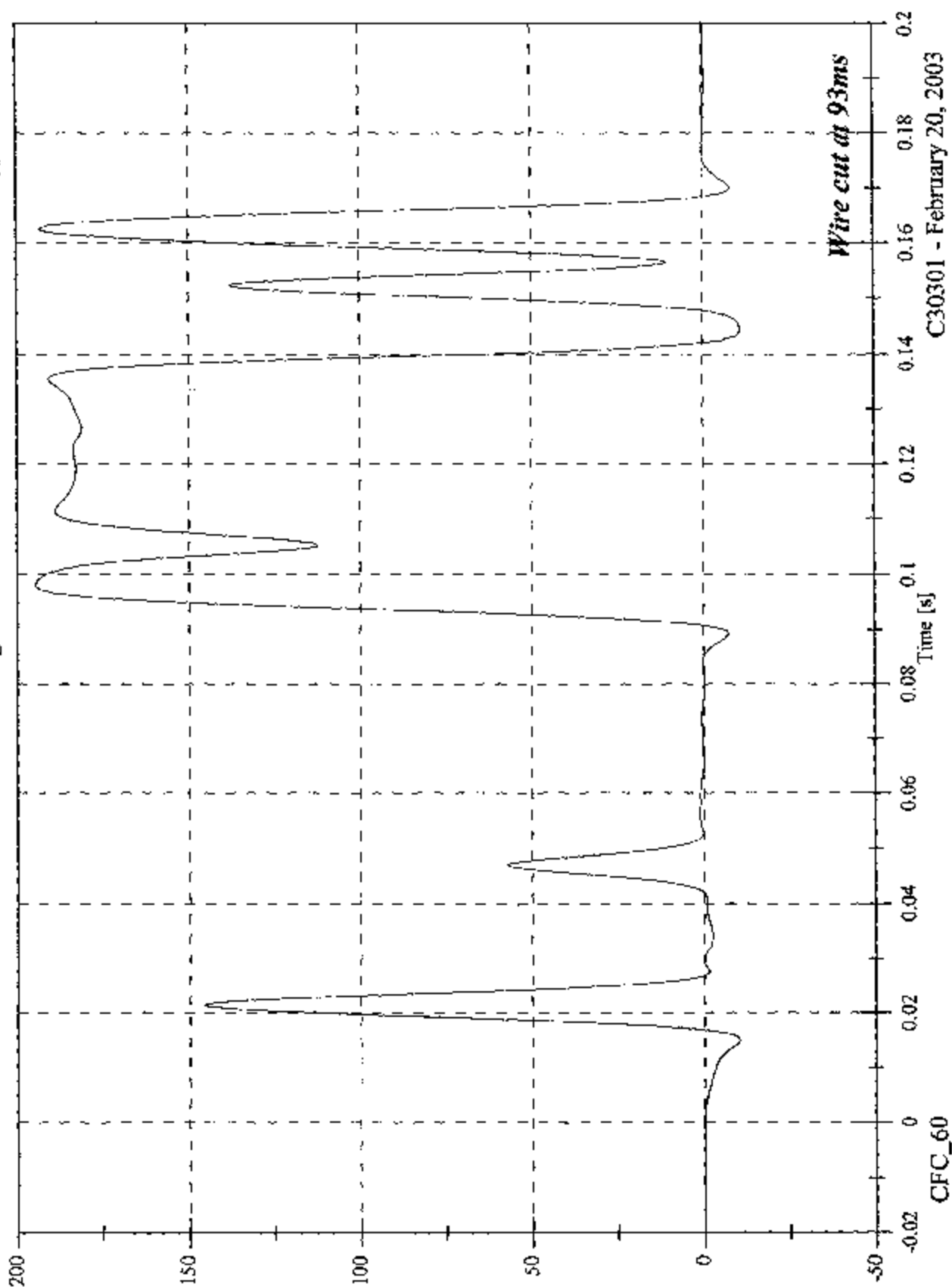
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 194.6 [g] at 0.098 [s]

Min: -11.0 [g] at 0.144 [s]

V2 A1 Right Front Sill x



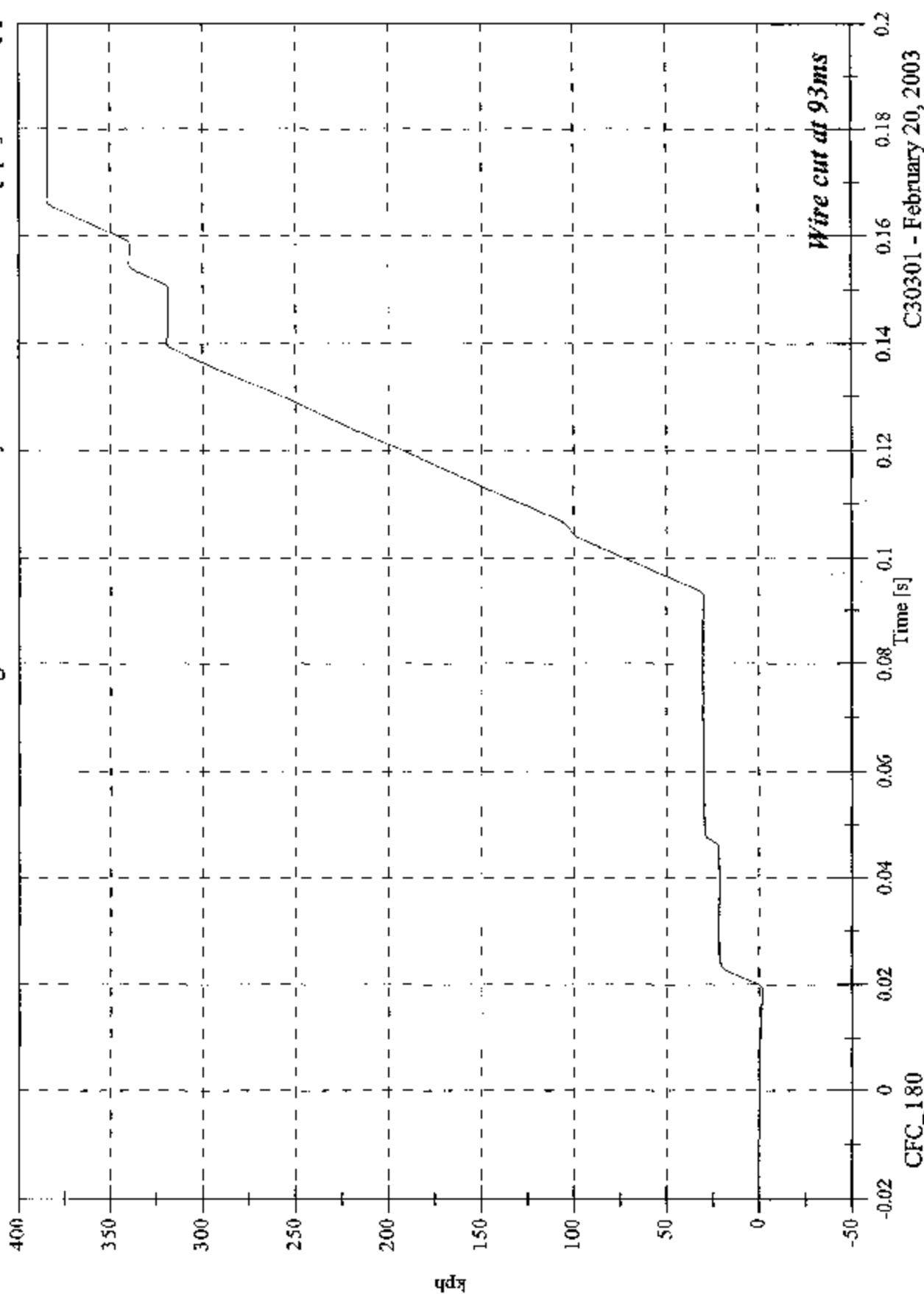
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 384.5 [kph] at 0.167 [s]

Min: -1.9 [kph] at 0.019 [s]

V2 A1 Right Front Sill x Velocity

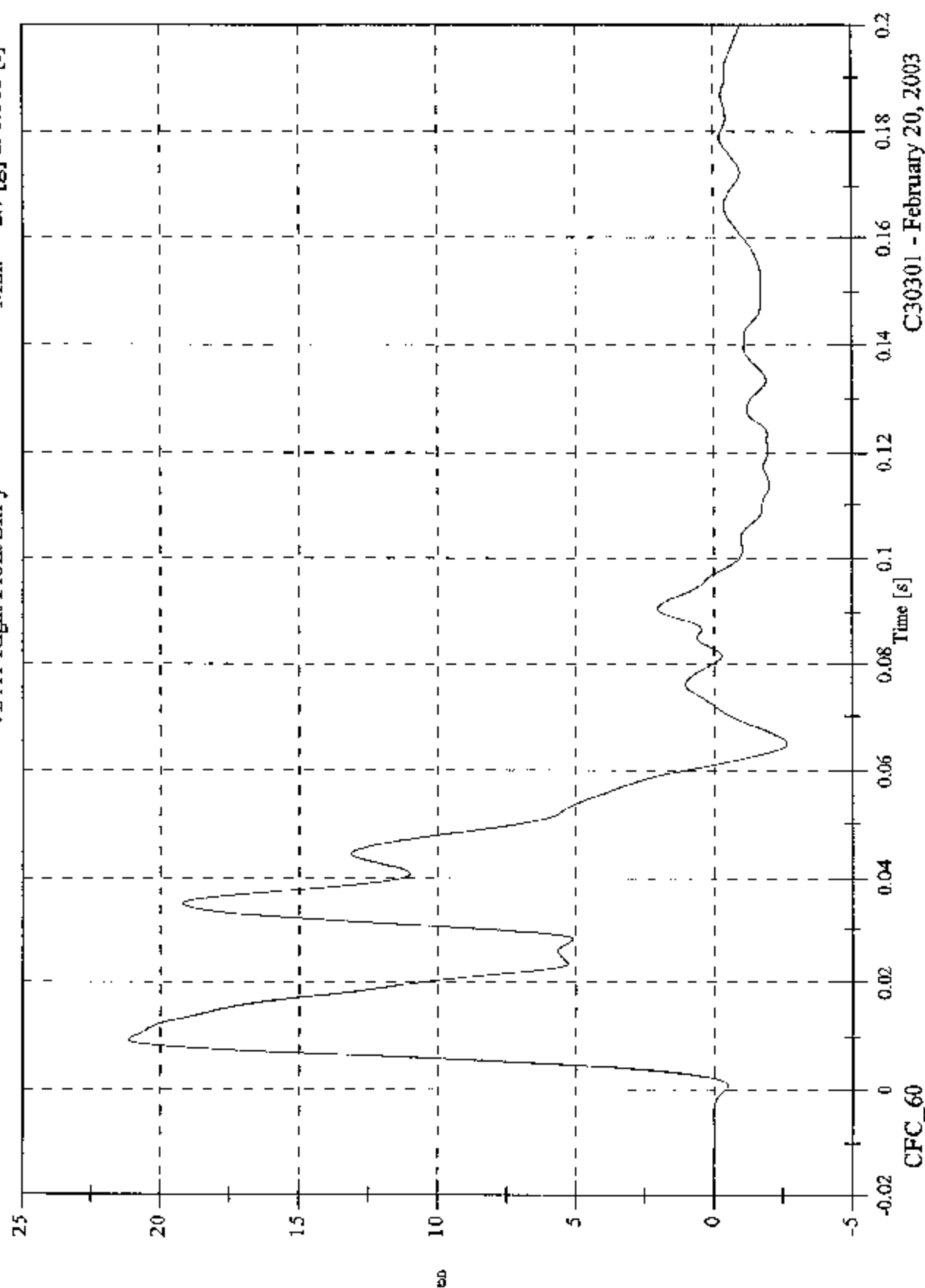


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FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A1 Right Front Sill y

Max: 21.2 [g] at 0.009 [s]
Min: -2.7 [g] at 0.065 [s]



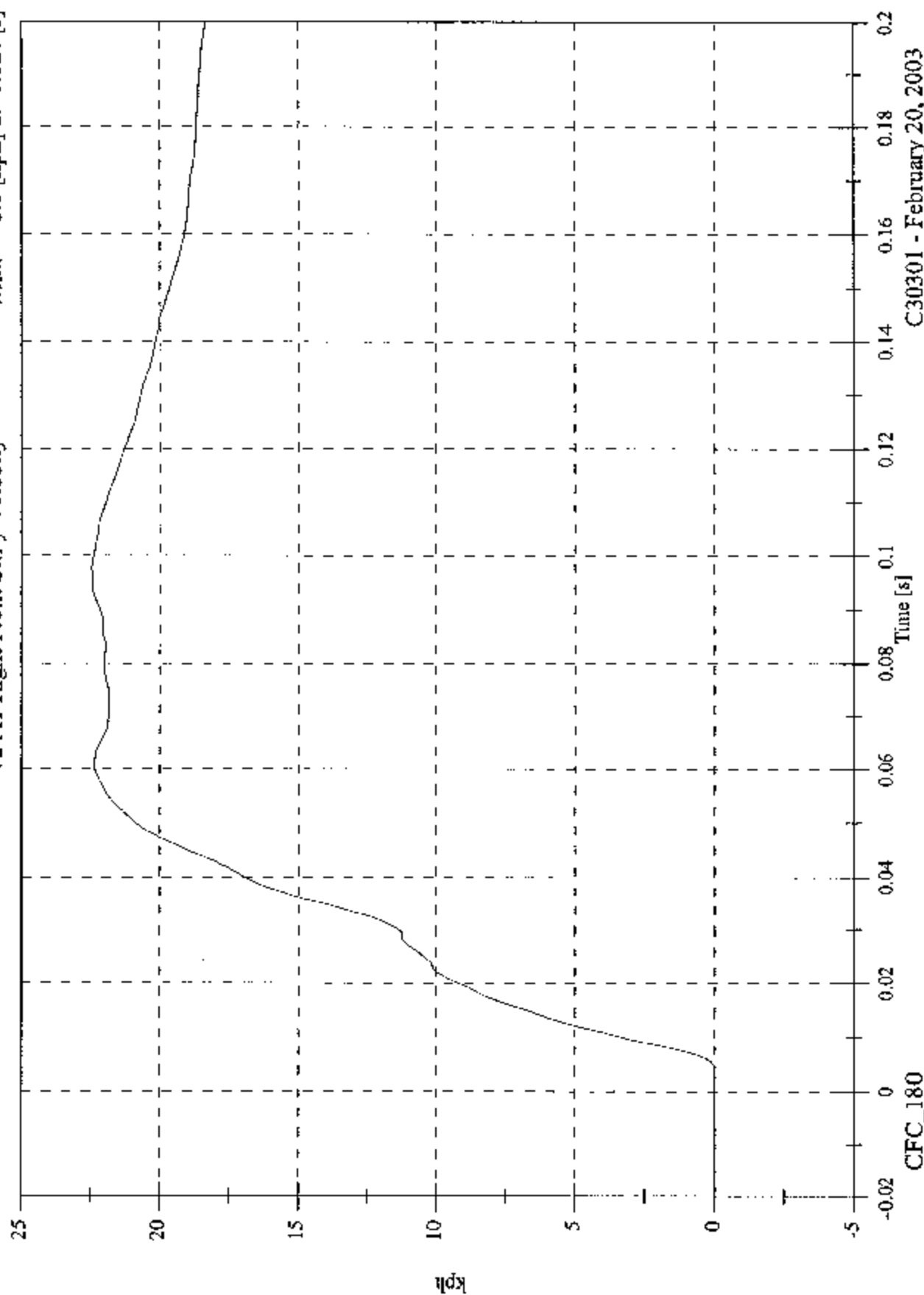
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 22.5 [kph] at 0.098 [s]

V2 A1 Right Front Sill y Velocity

Min: -0.0 [kph] at -0.020 [s]

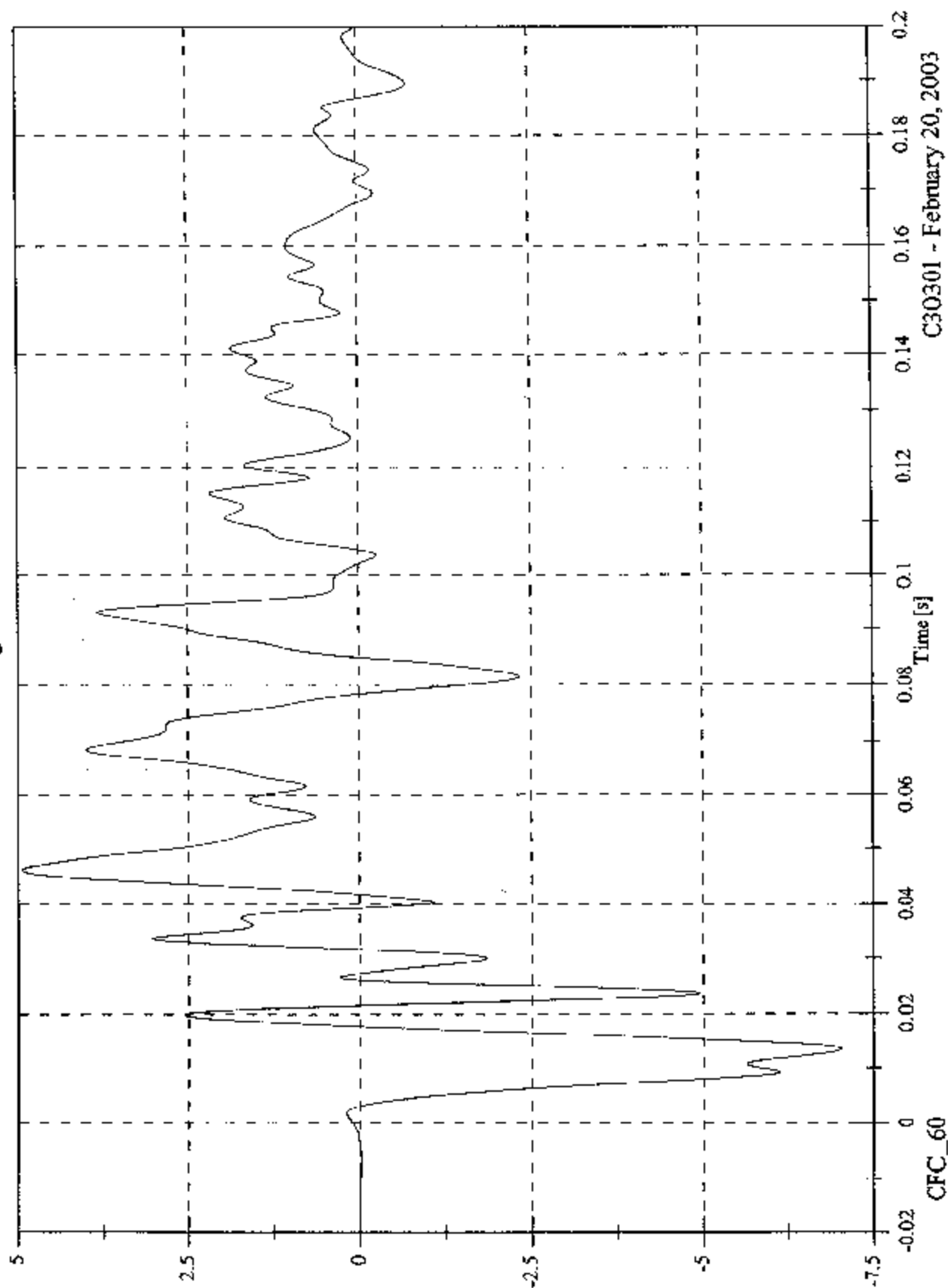


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FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A1 Right Front Sill z

Max: 4.9 [g] at 0.046 [s]
Min: -7.0 [g] at 0.013 [s]



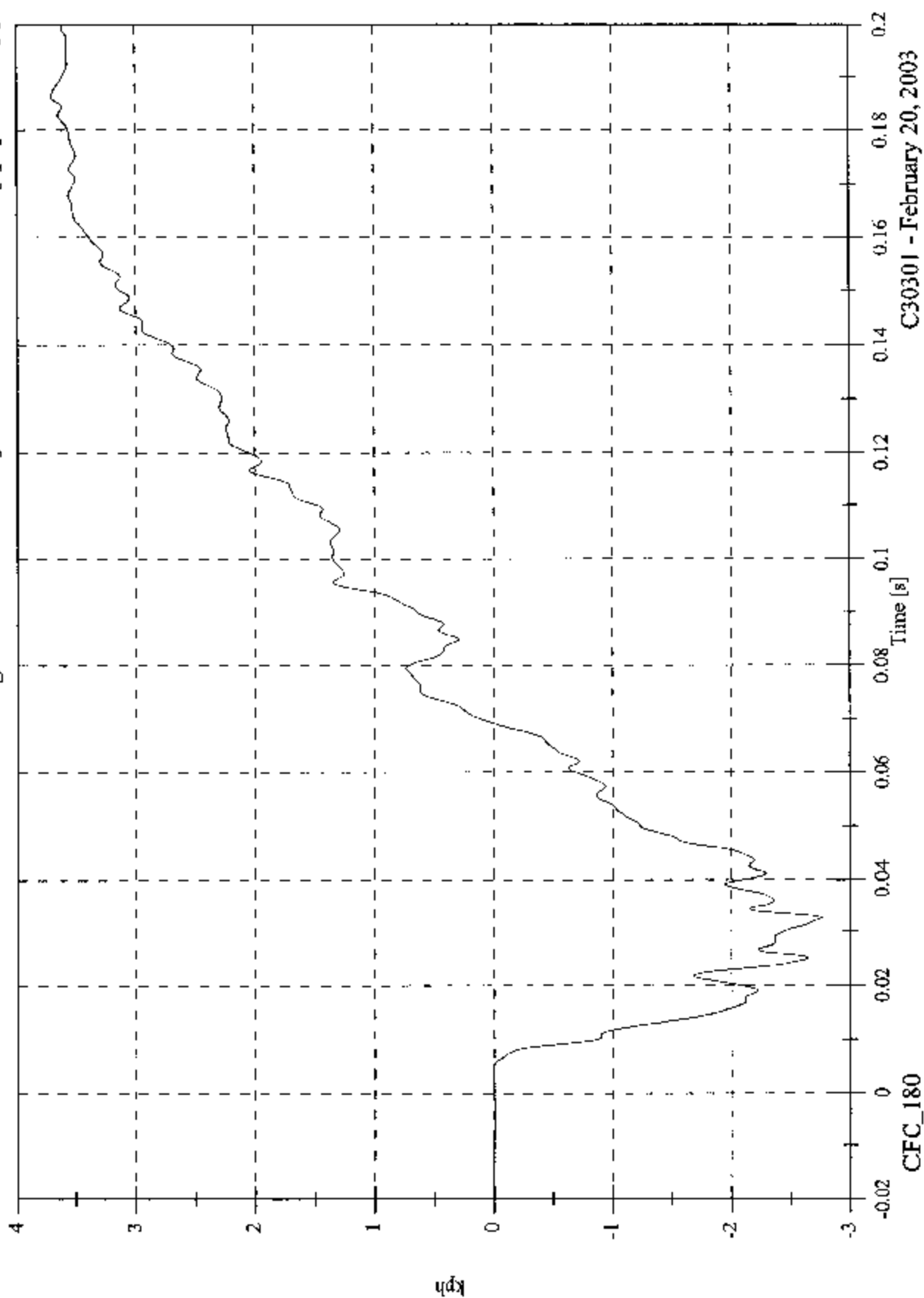
CFC_60

C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 3.7 [kph] at 0.186 [s]
Min: -2.8 [kph] at 0.032 [s]

V2 A1 Right Front Sill z Velocity

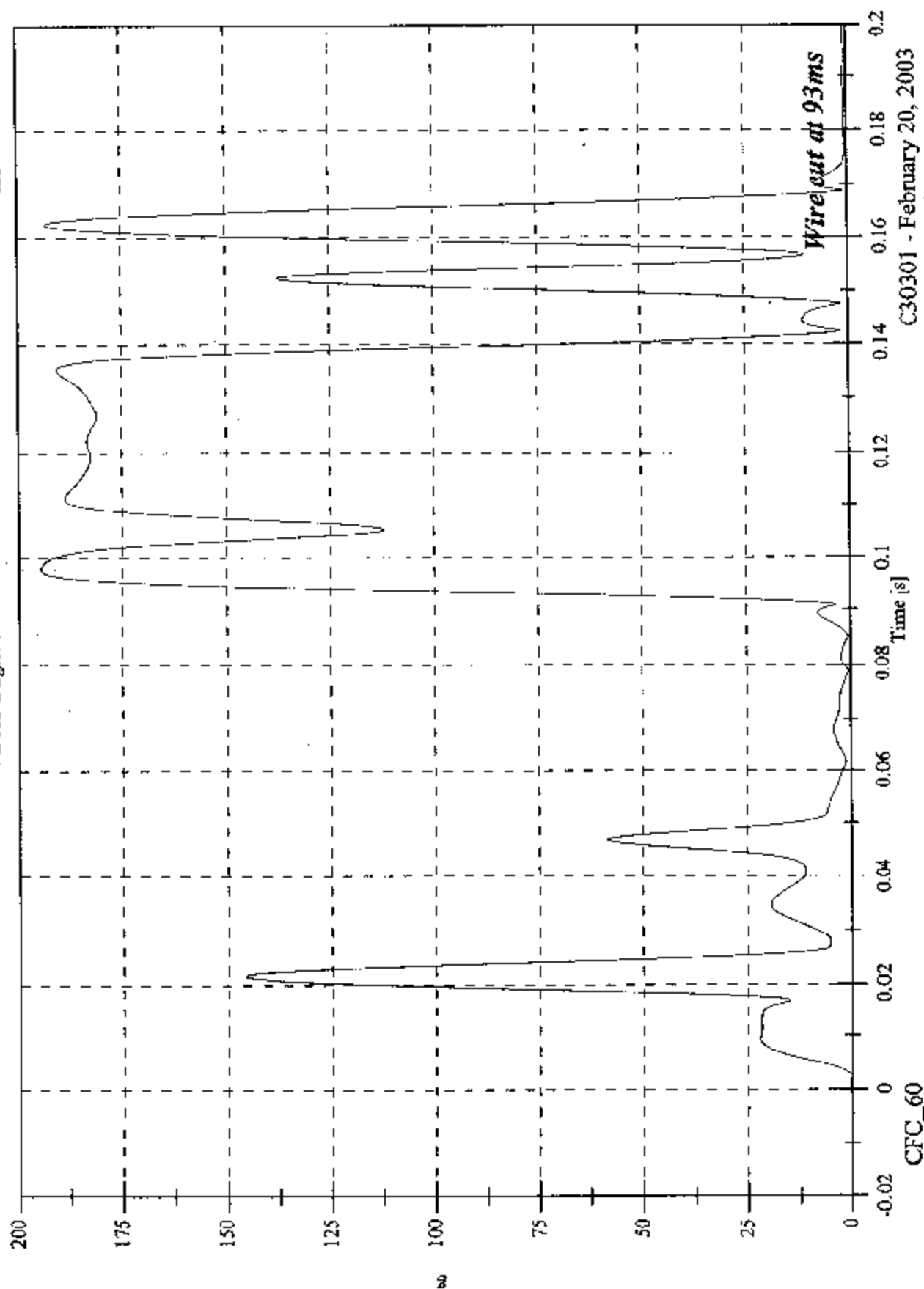


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FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 194.6 [g] at 0.098 [s]
Min: 0.0 [g] at -0.003 [s]

V2 A1 Right Front Sill Resultant

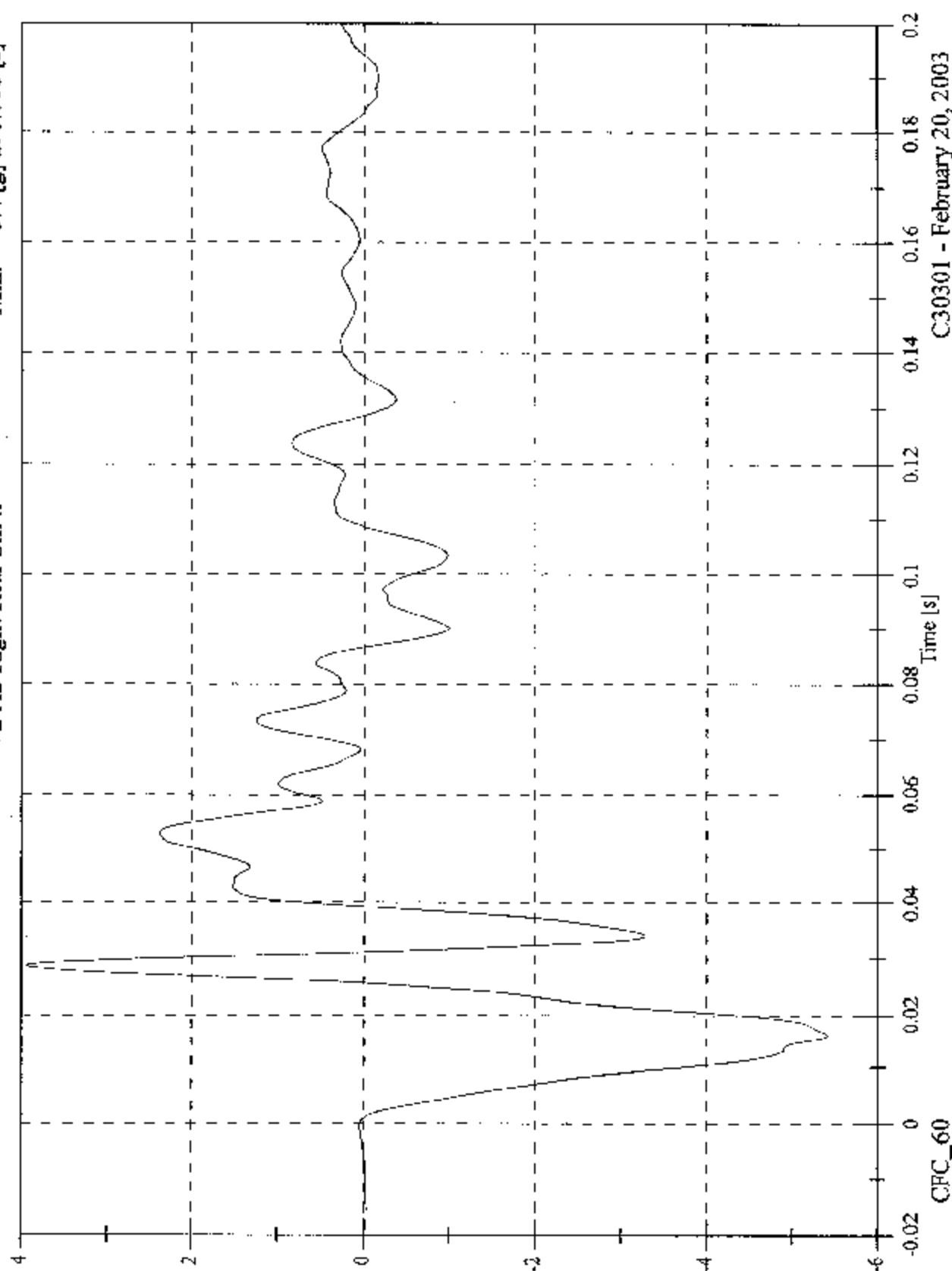


FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A2 Right Rear Sill x

Max: 3.9 [g] at 0.029 [s]

Min: -5.4 [g] at 0.016 [s]

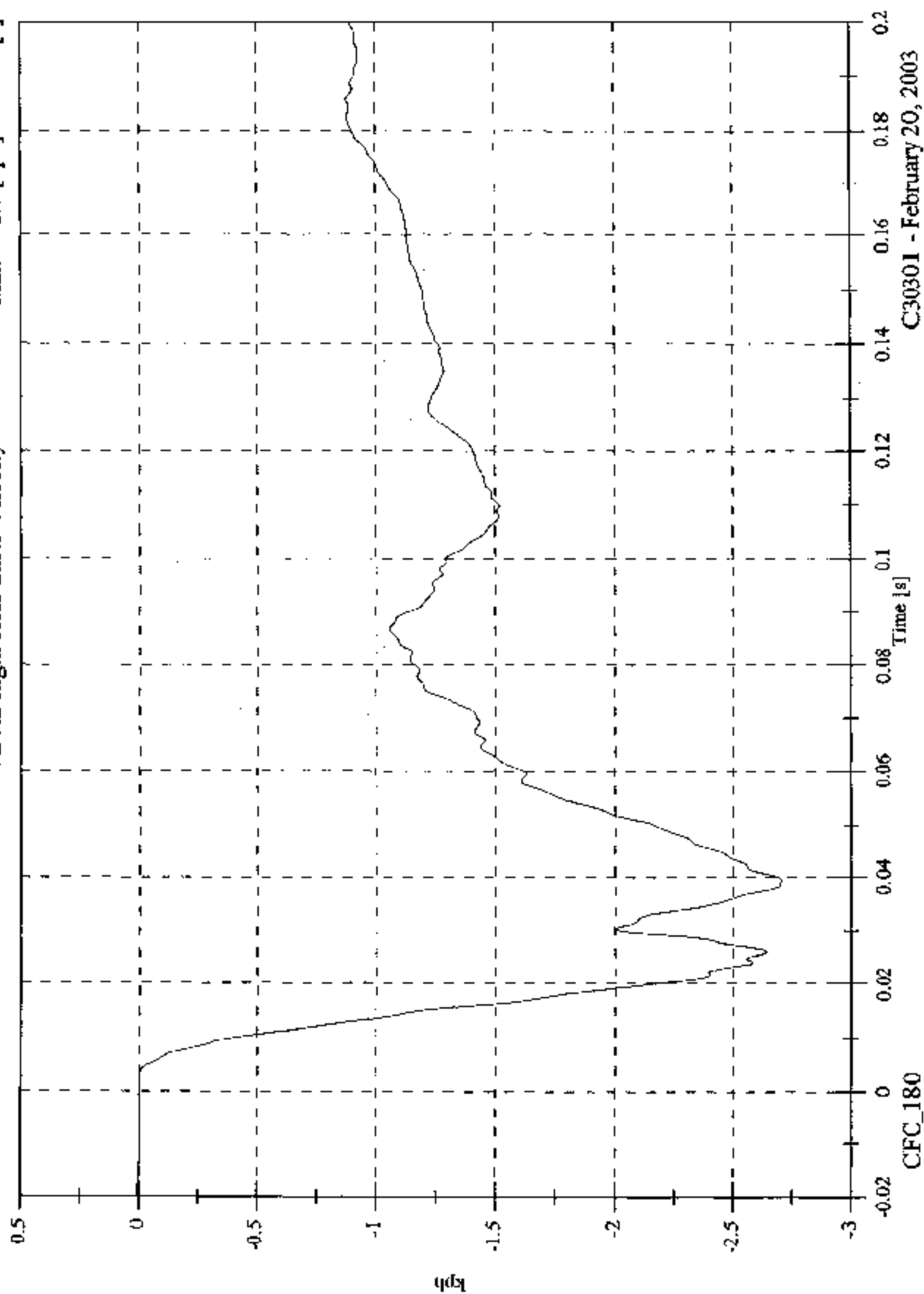


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FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 0.0 [kph] at -0.020 [s]
Min: -2.7 [kph] at 0.039 [s]

V2 A2 Right Rear Sill x Velocity

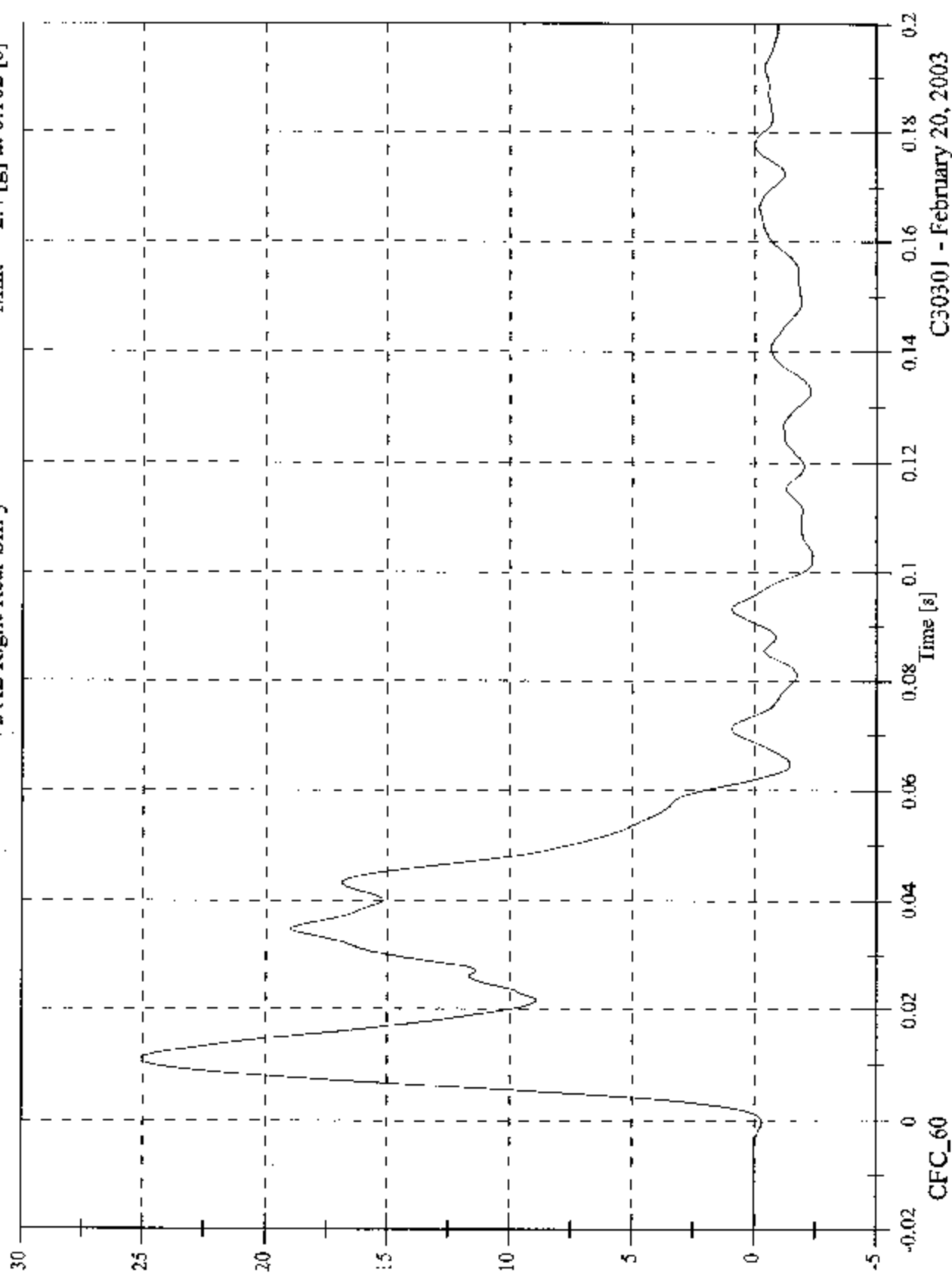


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FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A2 Right Rear Sill y

Max: 25.1 [g] at 0.011 [s]
Min: -2.4 [g] at 0.102 [s]

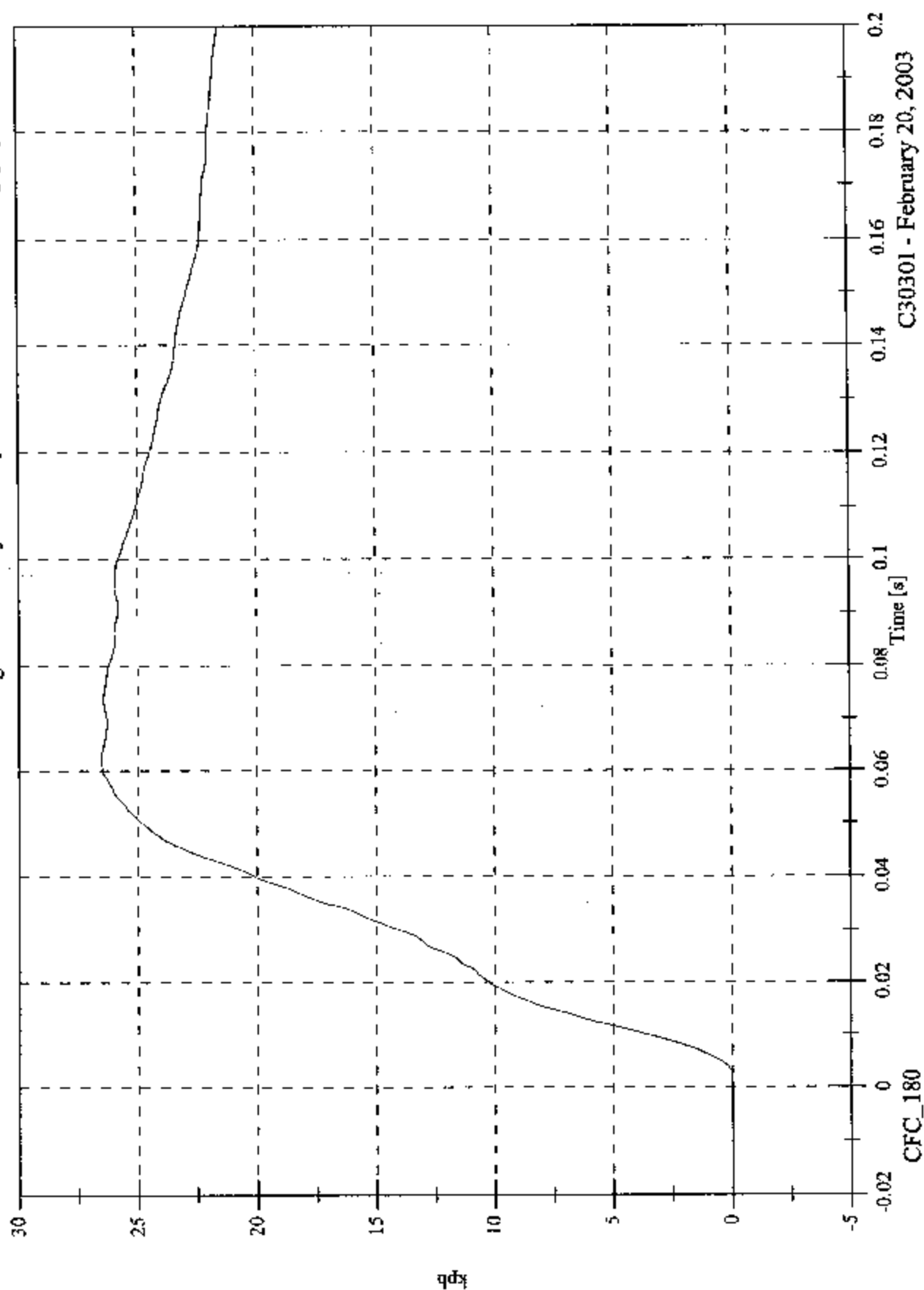


FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 26.5 [kph] at 0.063 [s]

Min: -0.0 [kph] at -0.016 [s]

V2 A2 Right Rear Sill y Velocity



CFC_180

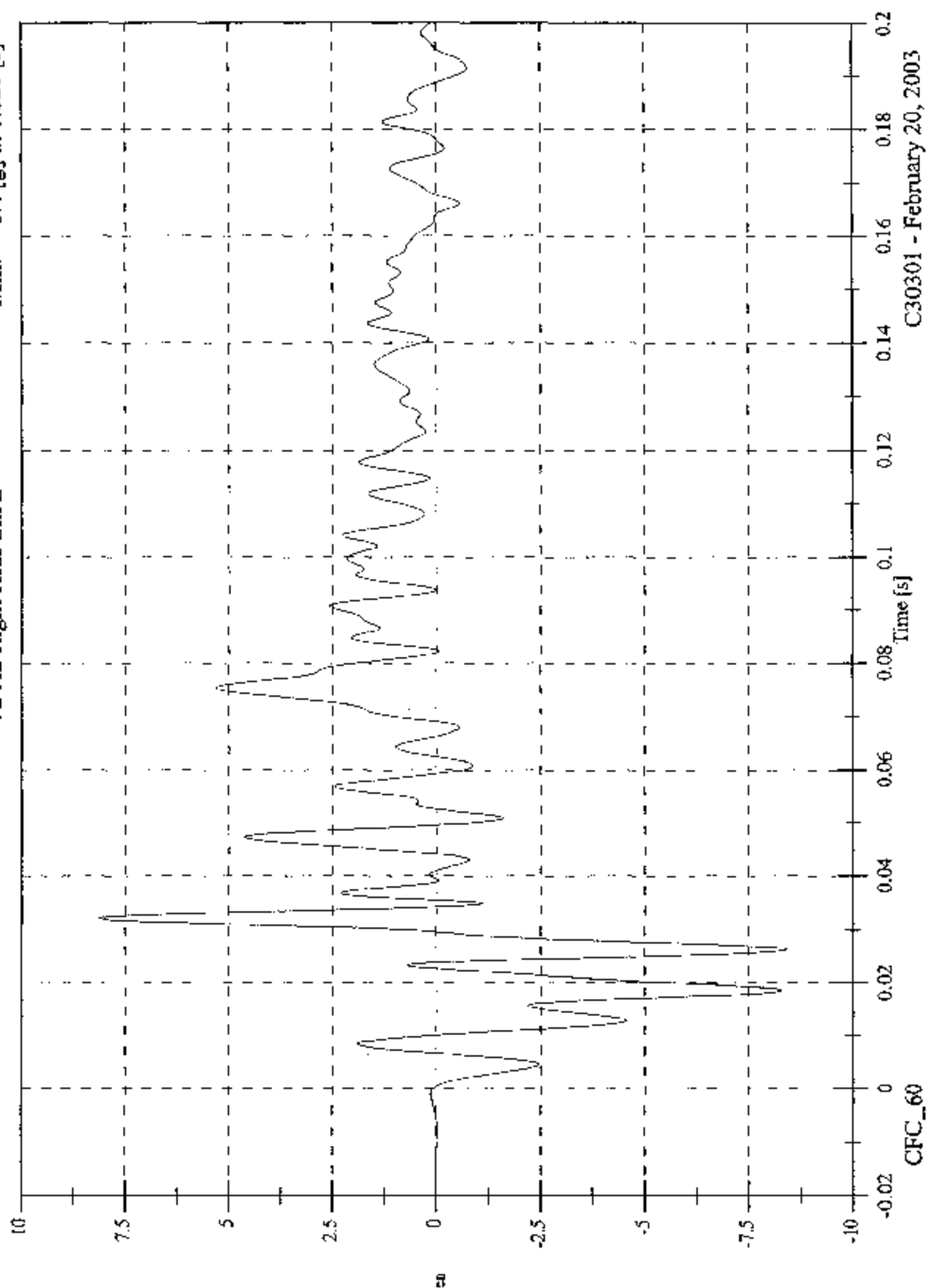
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 8.1 [g] at 0.032 [s]

Min: -8.4 [g] at 0.026 [s]

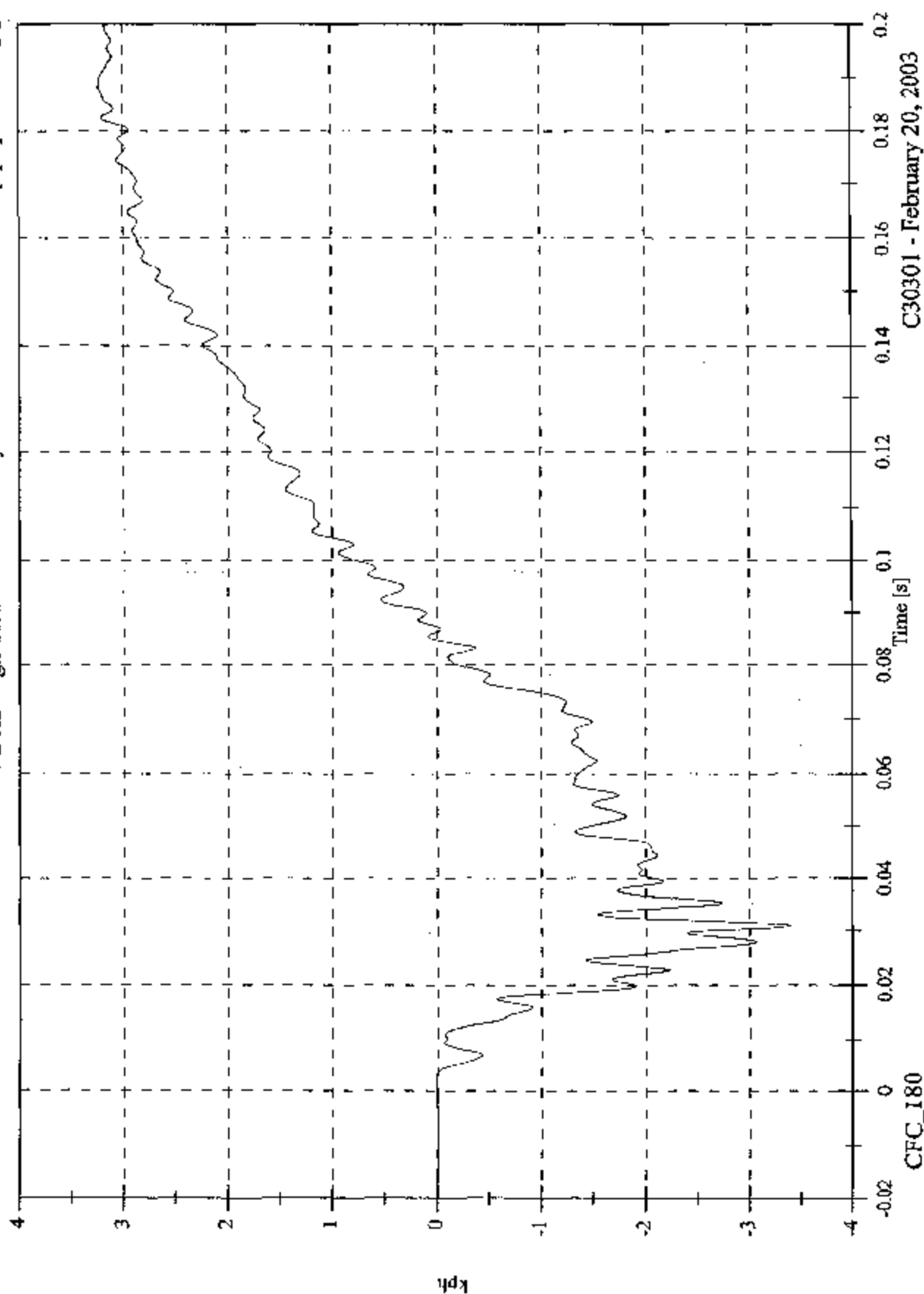
V2 A2 Right Rear Sill z



FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A2 Right Rear Sill z Velocity

Max: 3.2 [kph] at 0.188 [s]
Min: -3.4 [kph] at 0.031 [s]

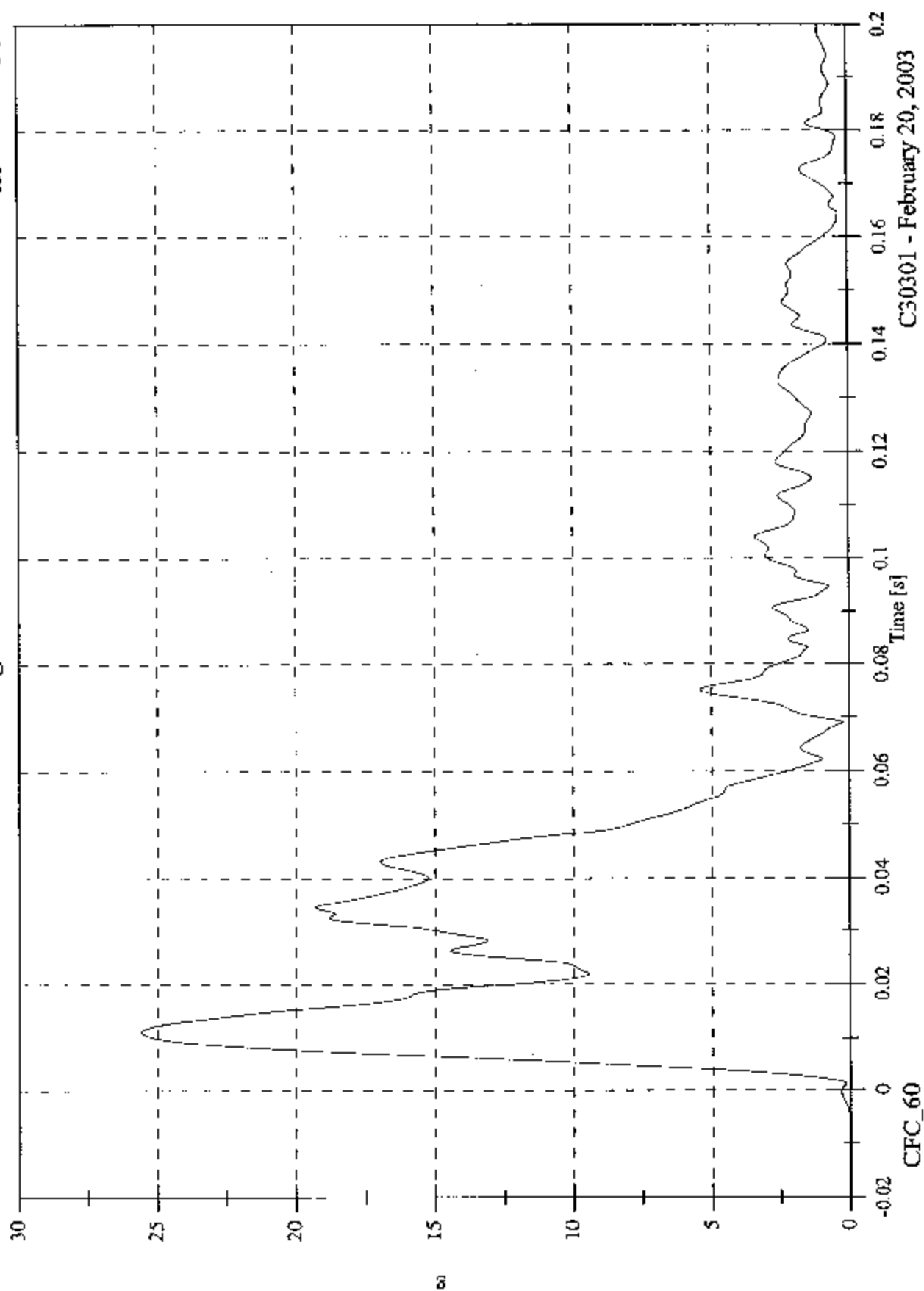


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FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 25.6 [g] at 0.011 [s]
Min: 0.0 [g] at -0.020 [s]

V2 A2 Right Rear Sill Resultant

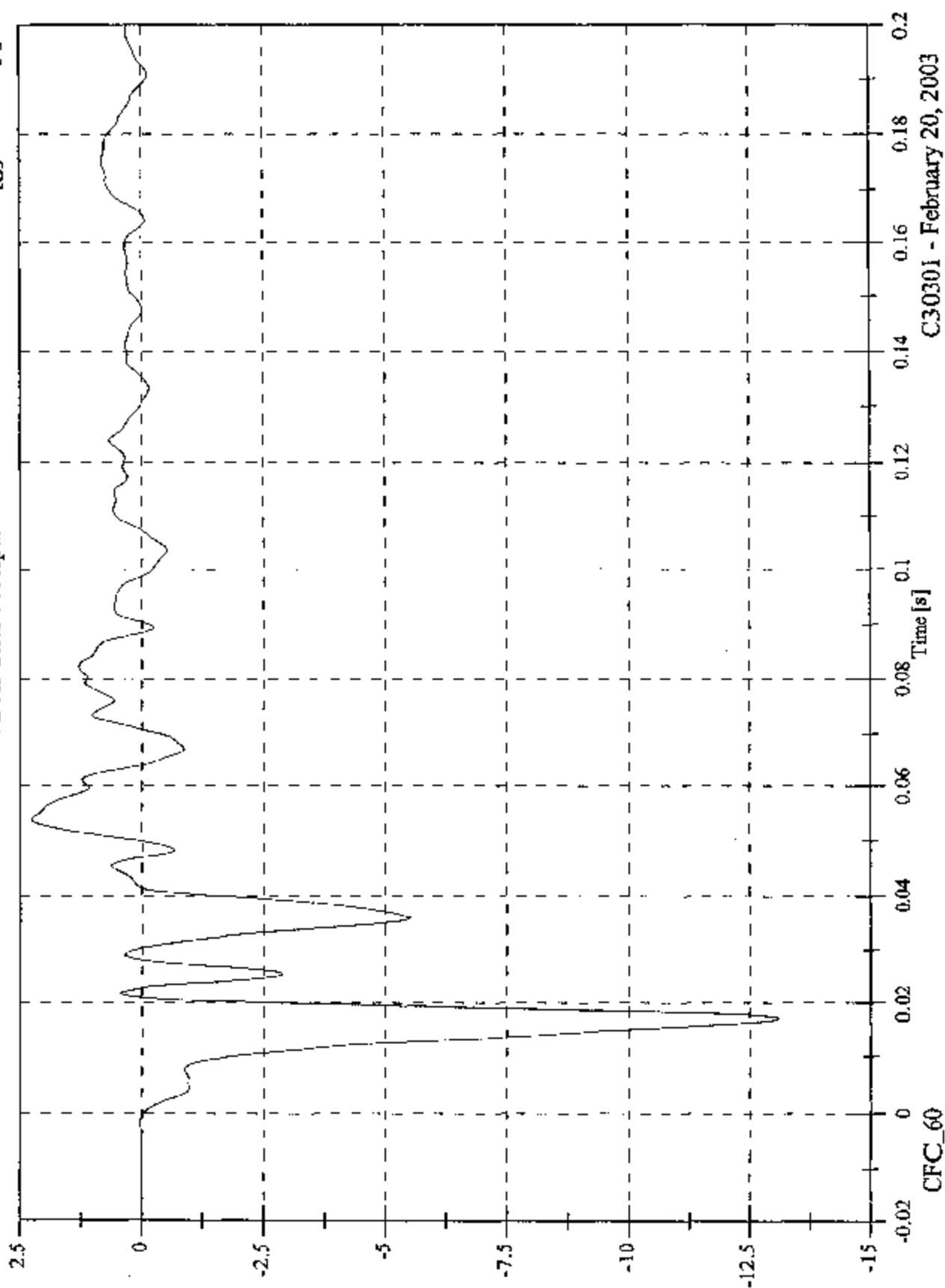


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FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 2.3 [g] at 0.054 [s]
Min: -13.1 [g] at 0.017 [s]

V2 A3 Rear Floorpan x

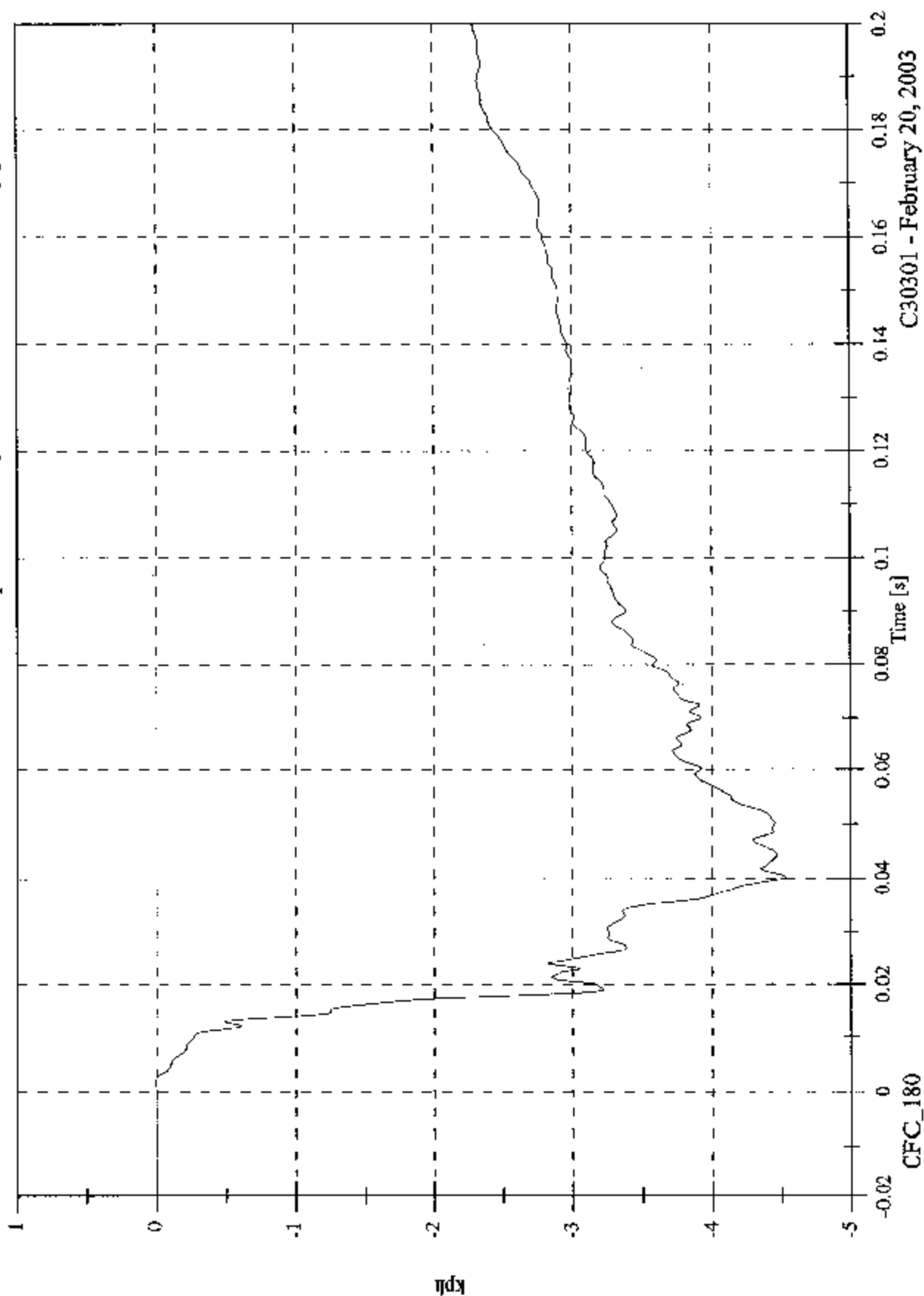


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FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A3 Rear Floorpan x Velocity

Max: 0.0 [kph] at 0.002 [s]
Min: -4.5 [kph] at 0.040 [s]

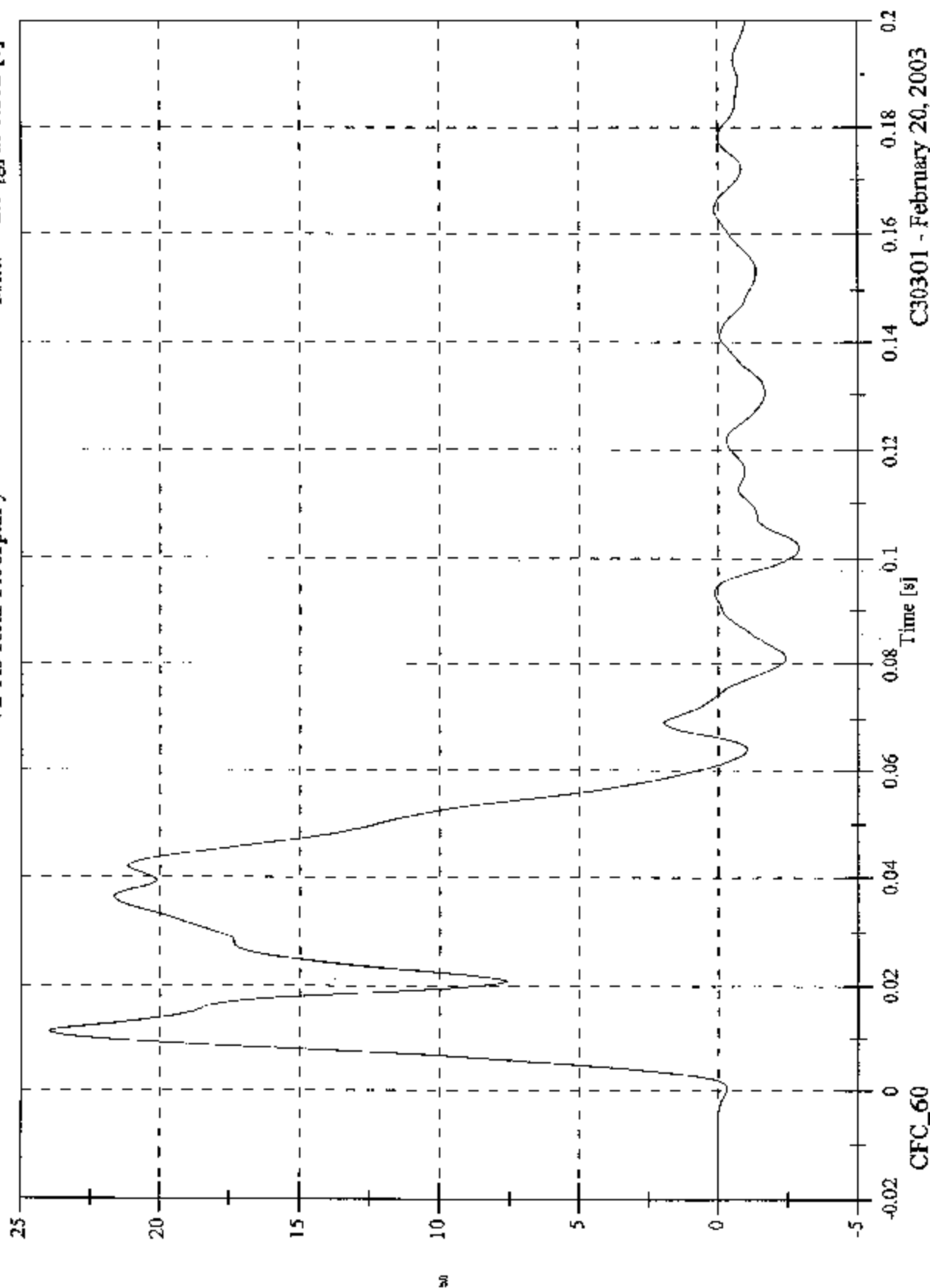


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FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A3 Rear Floorpan y

Max: 24.0 [g] at 0.011 [s]
Min: -2.9 [g] at 0.102 [s]

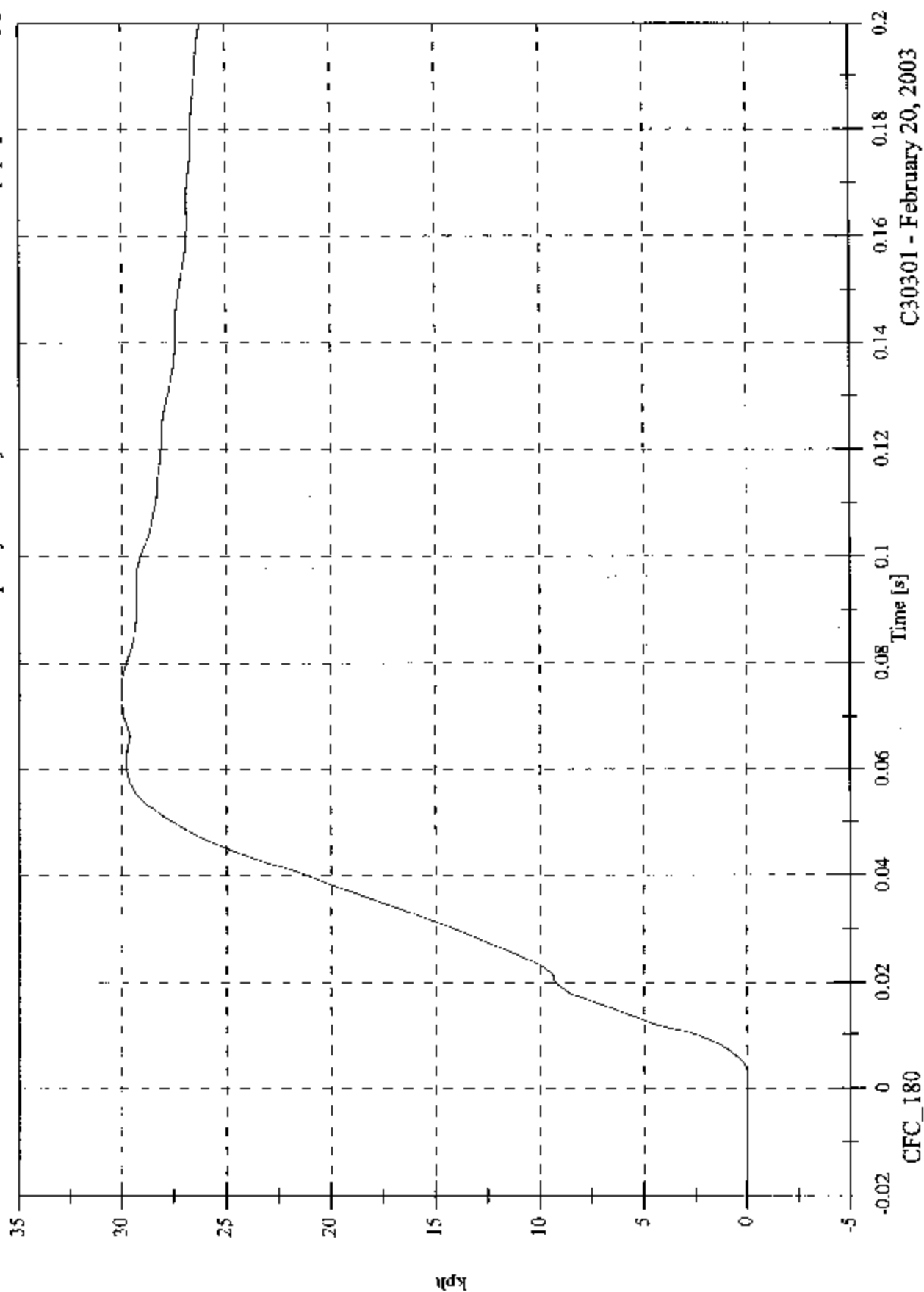


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 30.0 [kph] at 0.076 [s]
Min: -0.0 [kph] at -0.020 [s]

V2 A3 Rear Floorpan y Velocity

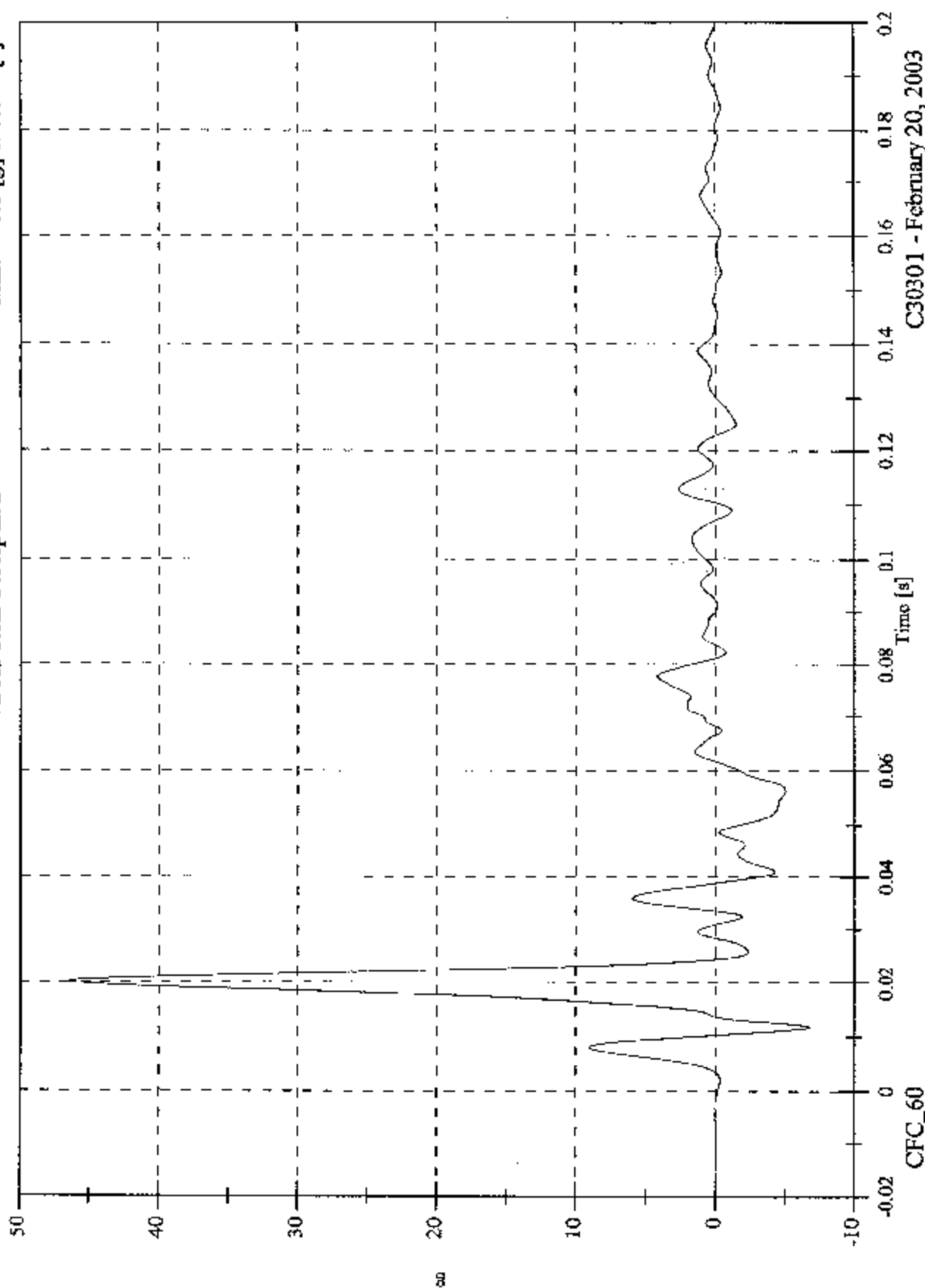


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FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A3 Rear Floorpan z

Max: 46.5 [g] at 0.020 [s]
Min: -6.8 [g] at 0.012 [s]

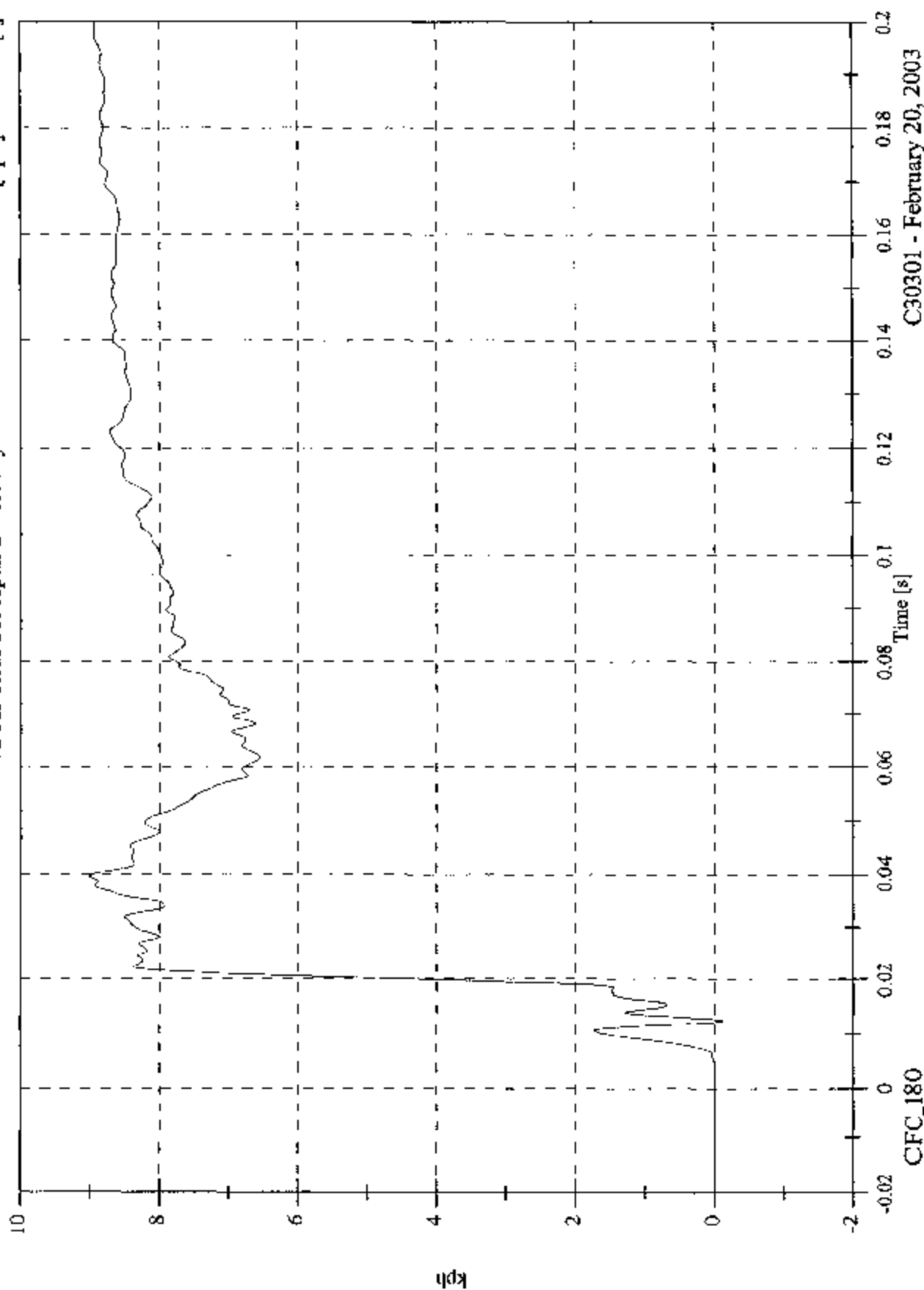


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FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 9.0 [kph] at 0.040 [s]
Min: -0.1 [kph] at 0.013 [s]

V2 A3 Rear Floorpan z Velocity

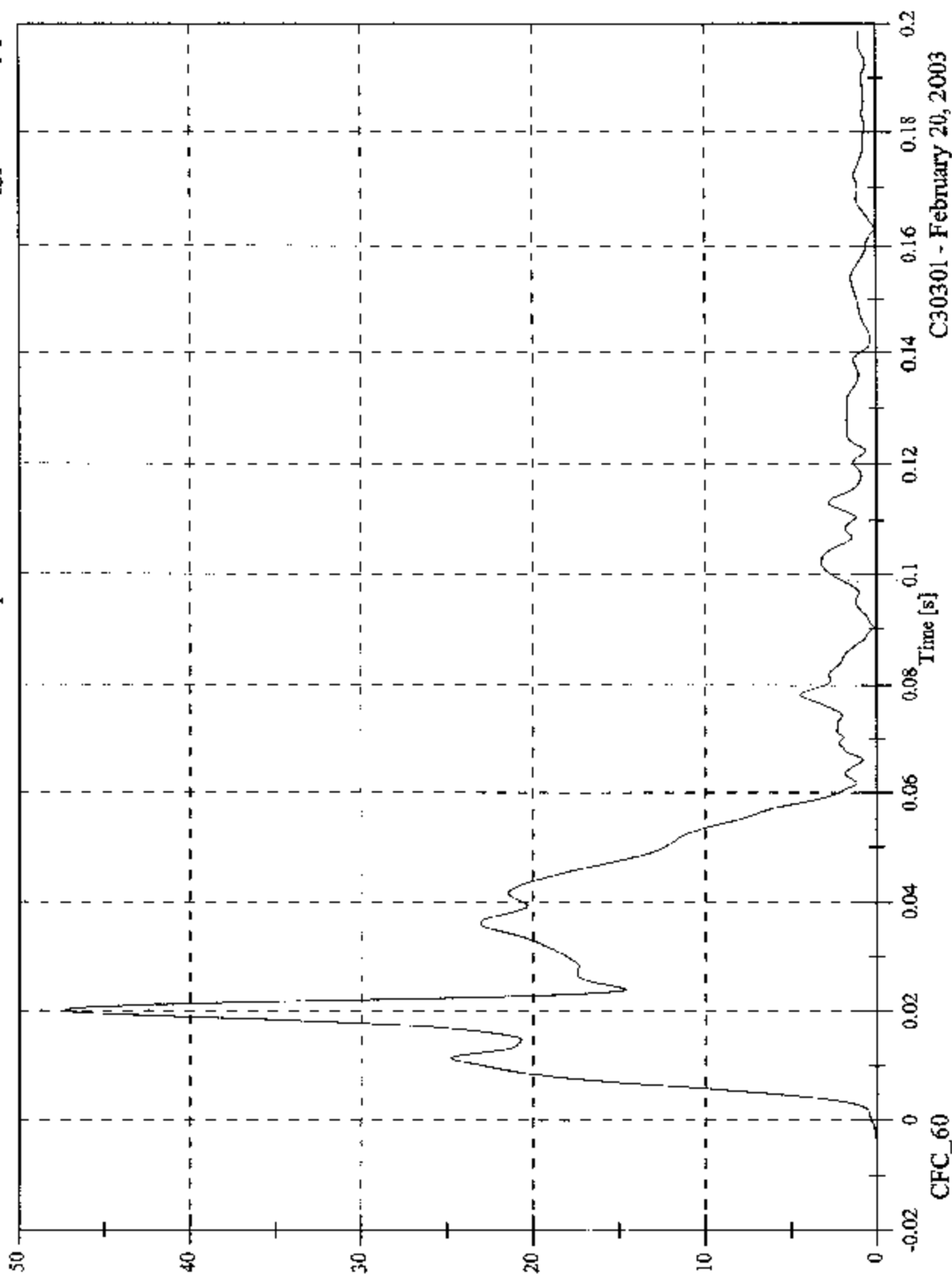


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FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A3 Rear Floorpan Resultant

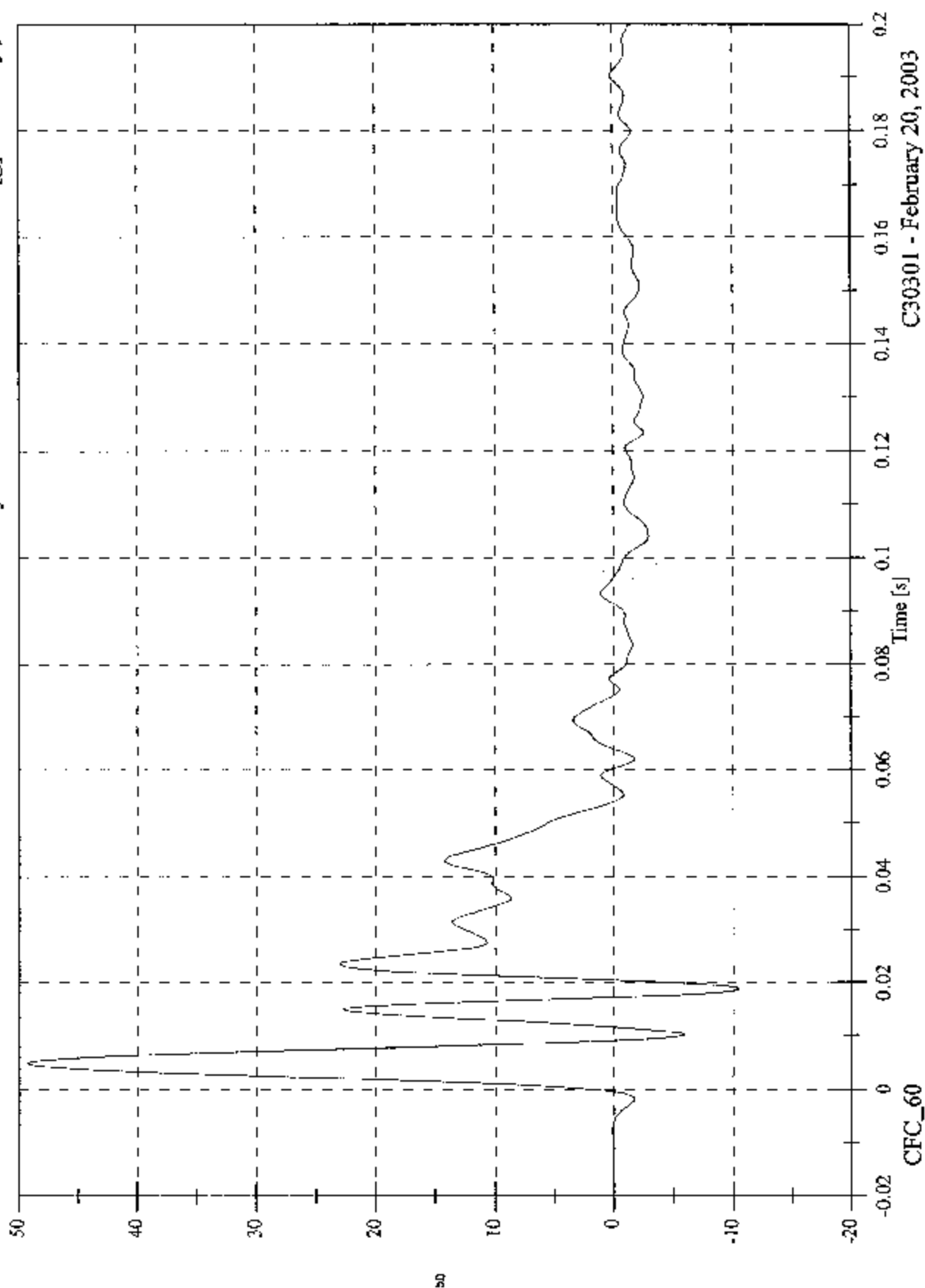
Max: 47.3 [g] at 0.020 [s]
Min: 0.0 [g] at -0.012 [s]



FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A4 Left Rear Sill y

Max: 49.3 [g] at 0.005 [s]
Min: -10.5 [g] at 0.019 [s]

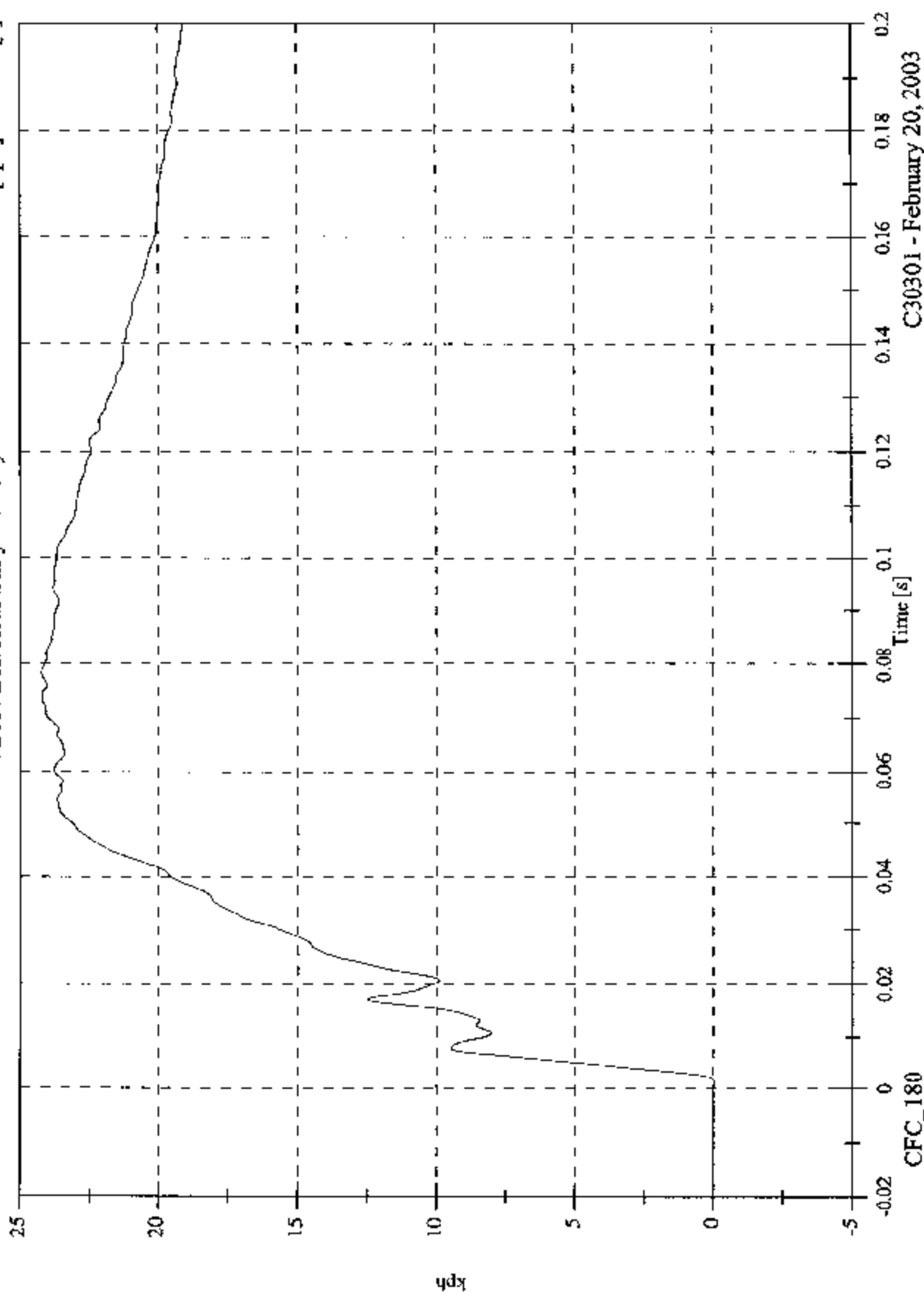


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 24.3 [kph] at 0.078 [s]
Min: -0.0 [kph] at 0.001 [s]

V2 A4 Left Rear Sill y Velocity



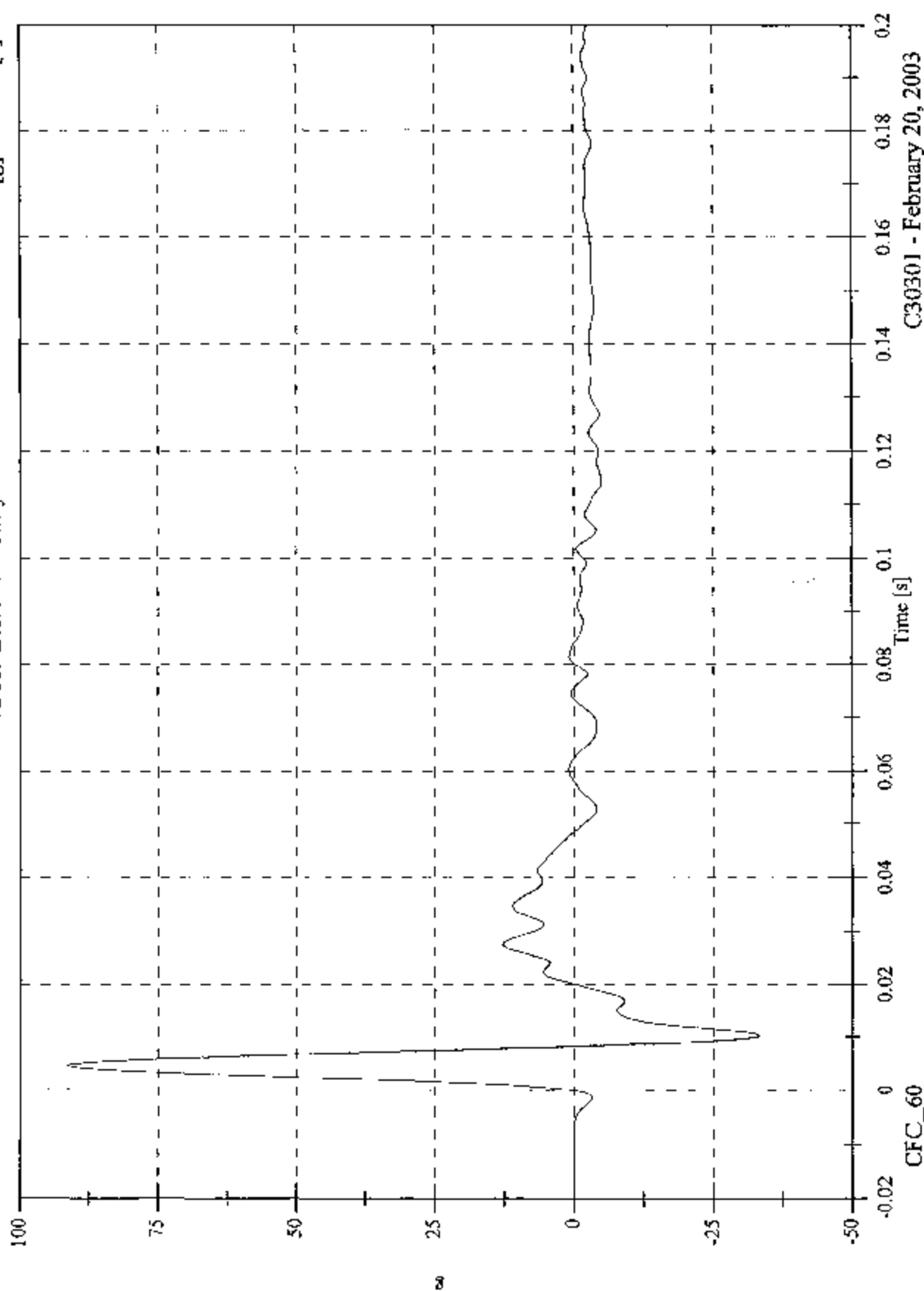
CFC_180

C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A5 Left Front Sill y

Max: 91.5 [g] at 0.005 [s]
Min: -33.3 [g] at 0.010 [s]



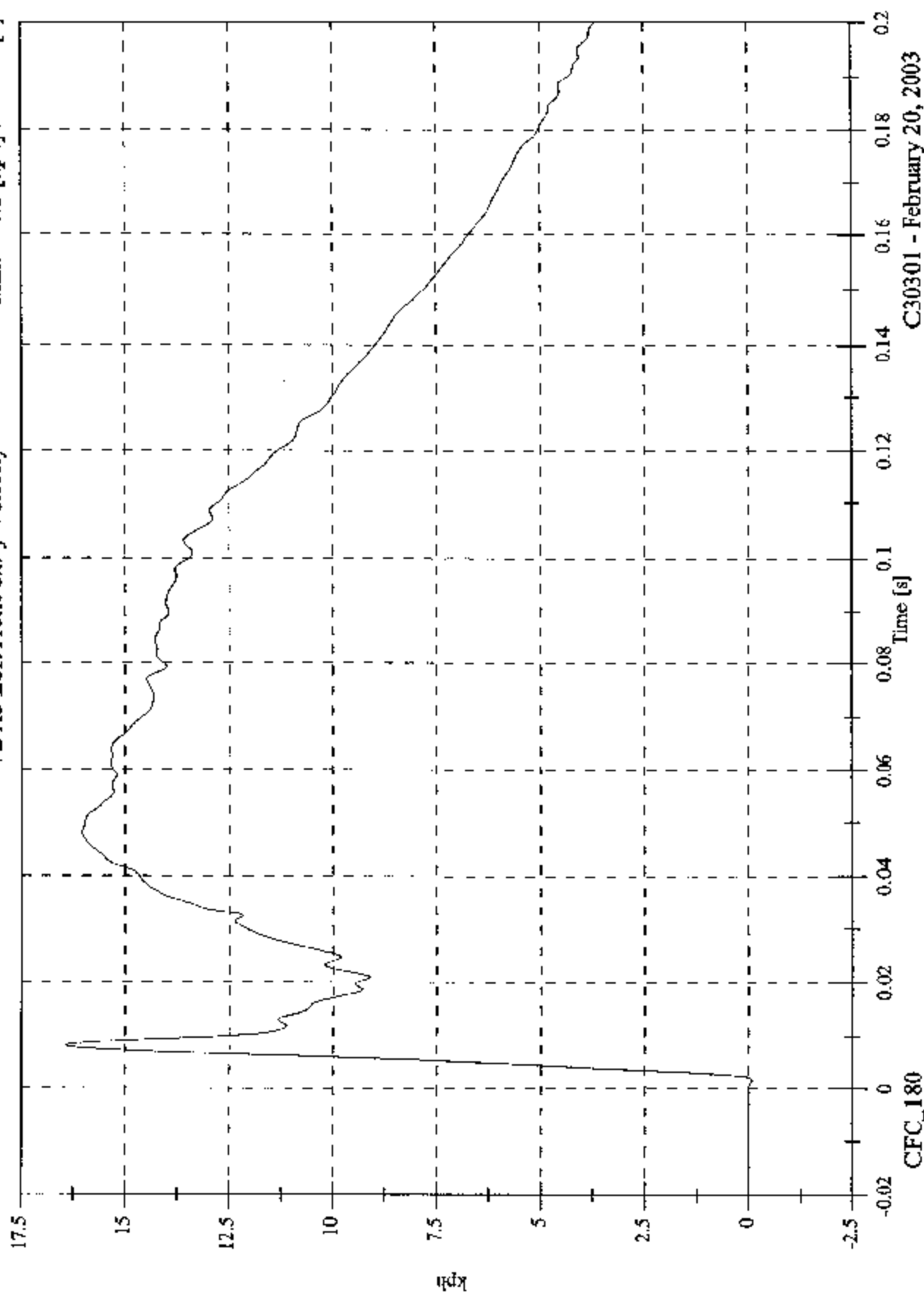
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 16.4 [kph] at 0.008 [s]

Min: -0.1 [kph] at 0.002 [s]

V2 A5 Left Front Sill y Velocity



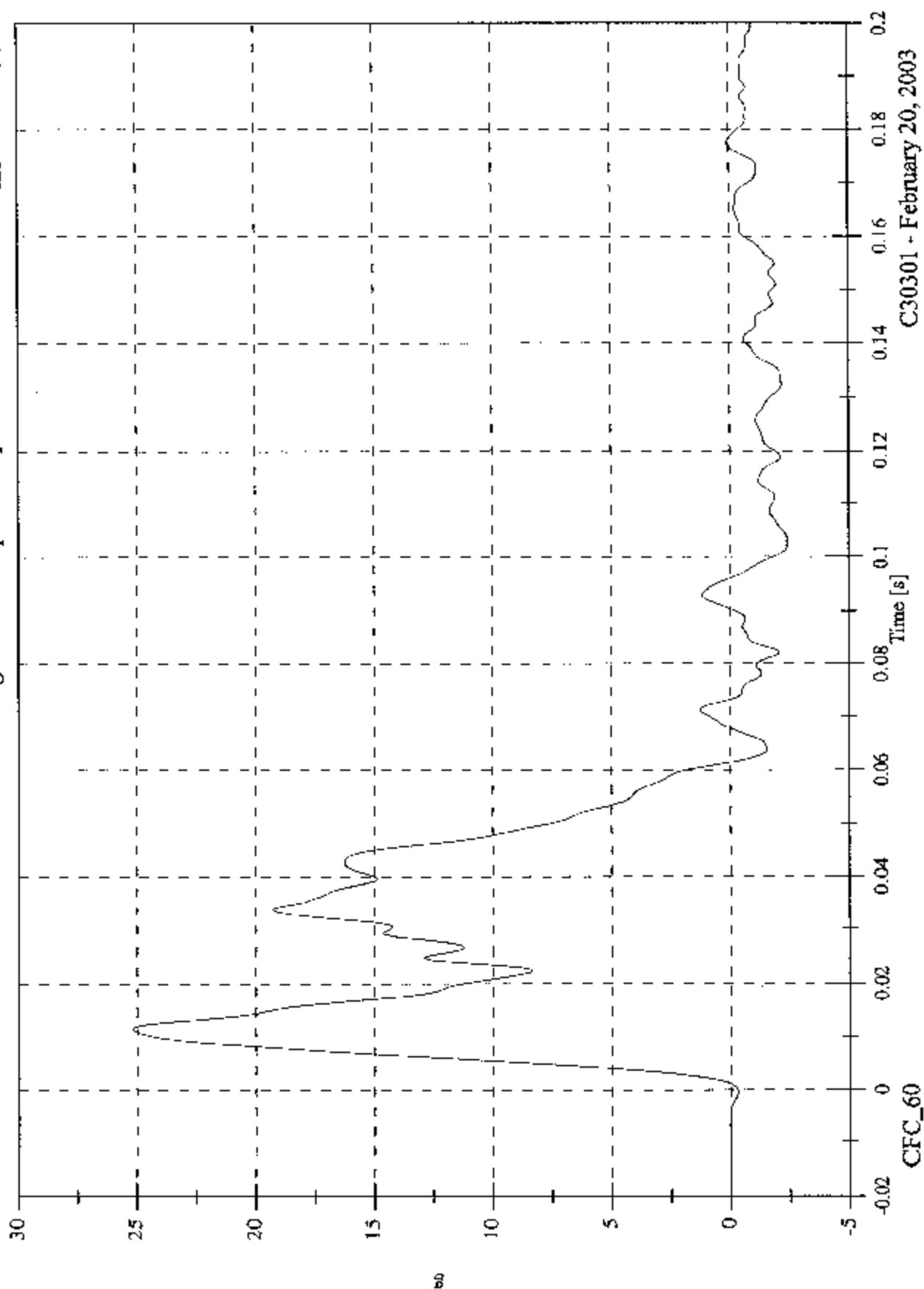
CFC_180

C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A7 Right Rear Compartment y

Max: 25.2 [g] at 0.012 [s]
Min: -2.4 [g] at 0.103 [s]

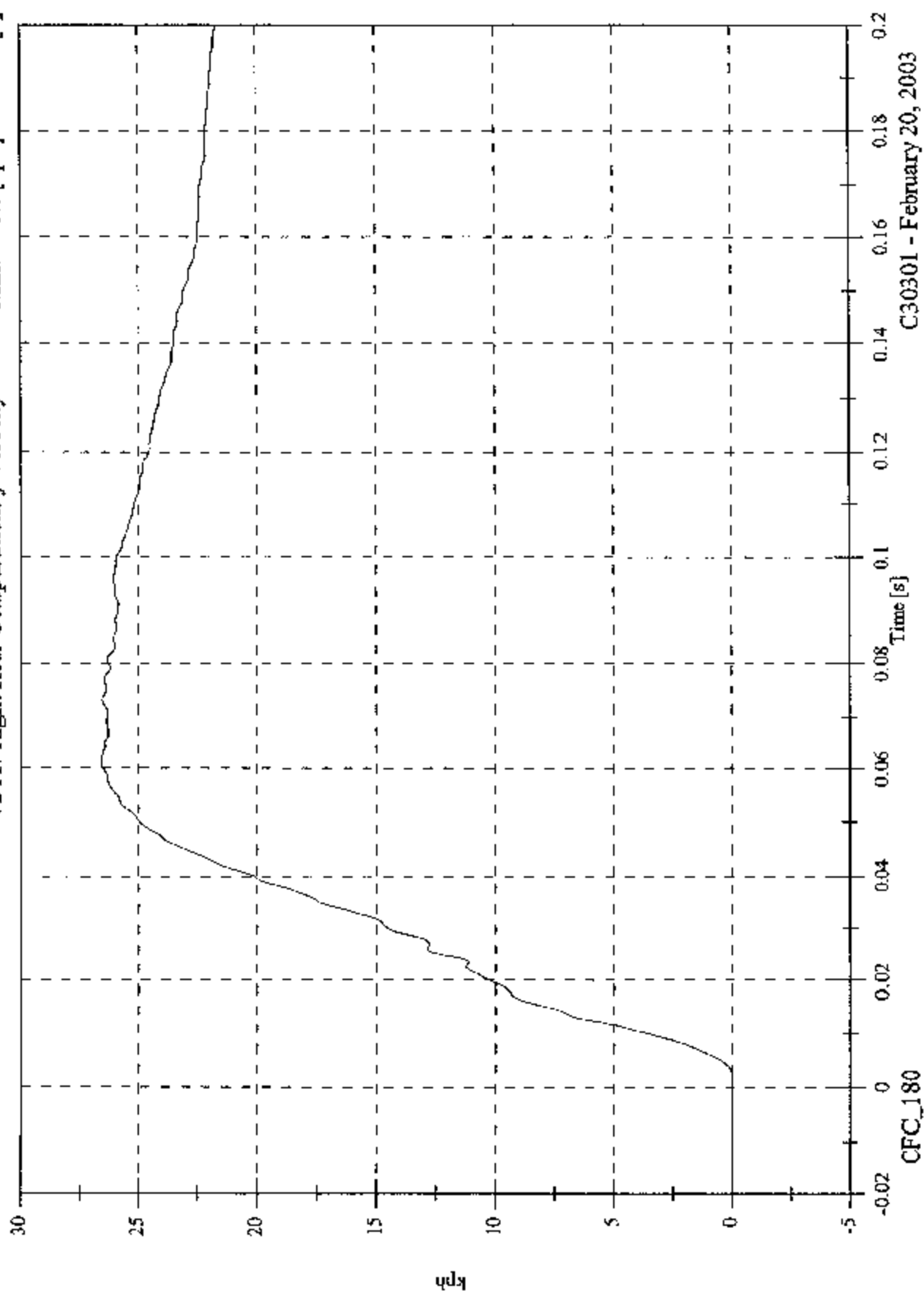


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FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A7 Right Rear Compartment y Velocity

Max: 26.6 [kph] at 0.061 [s]
Min: -0.0 [kph] at -0.018 [s]



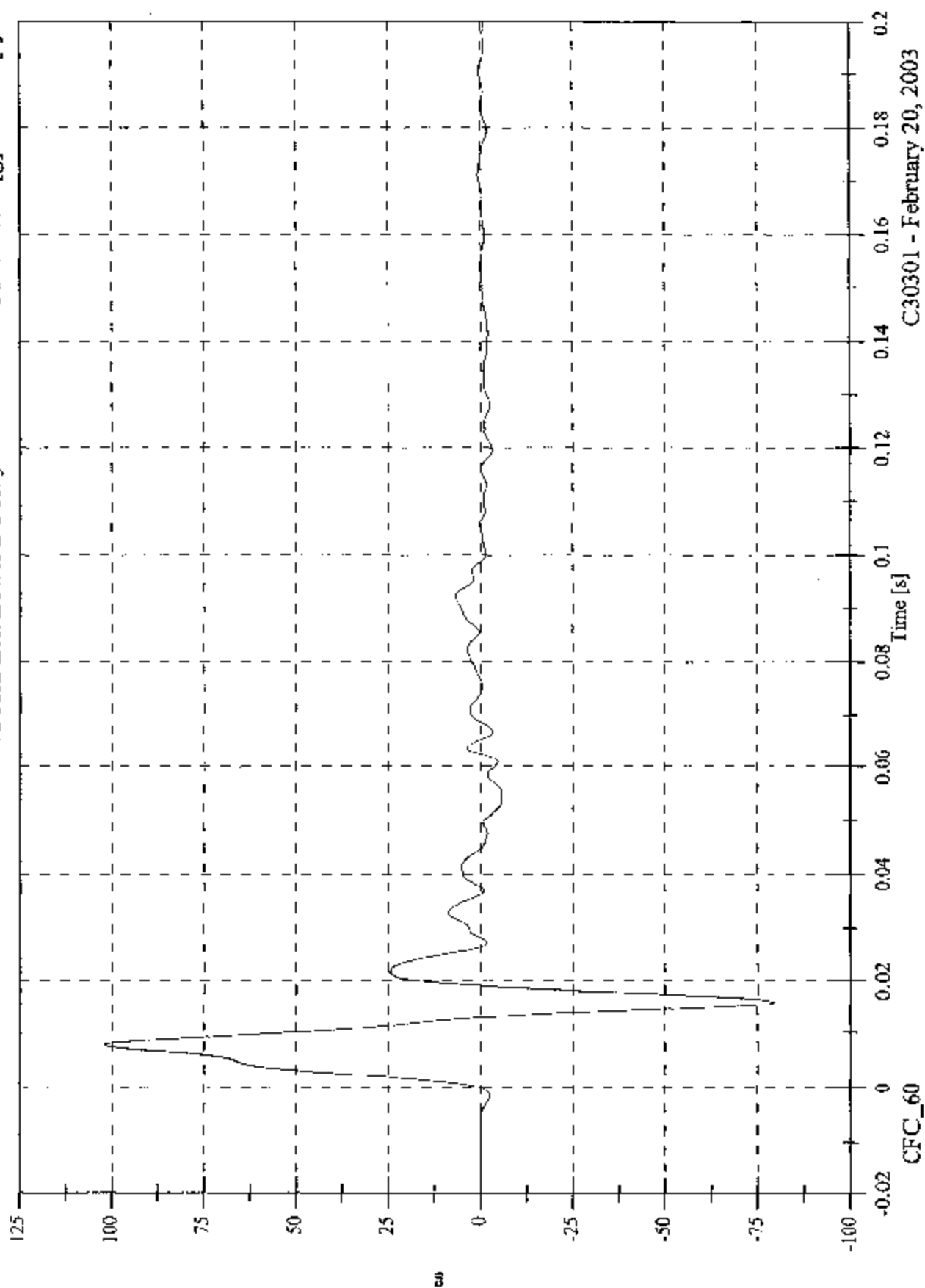
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 102.0 [g] at 0.007 [s]

Min: -79.3 [g] at 0.016 [s]

V2 A12 Left Lower B Post y

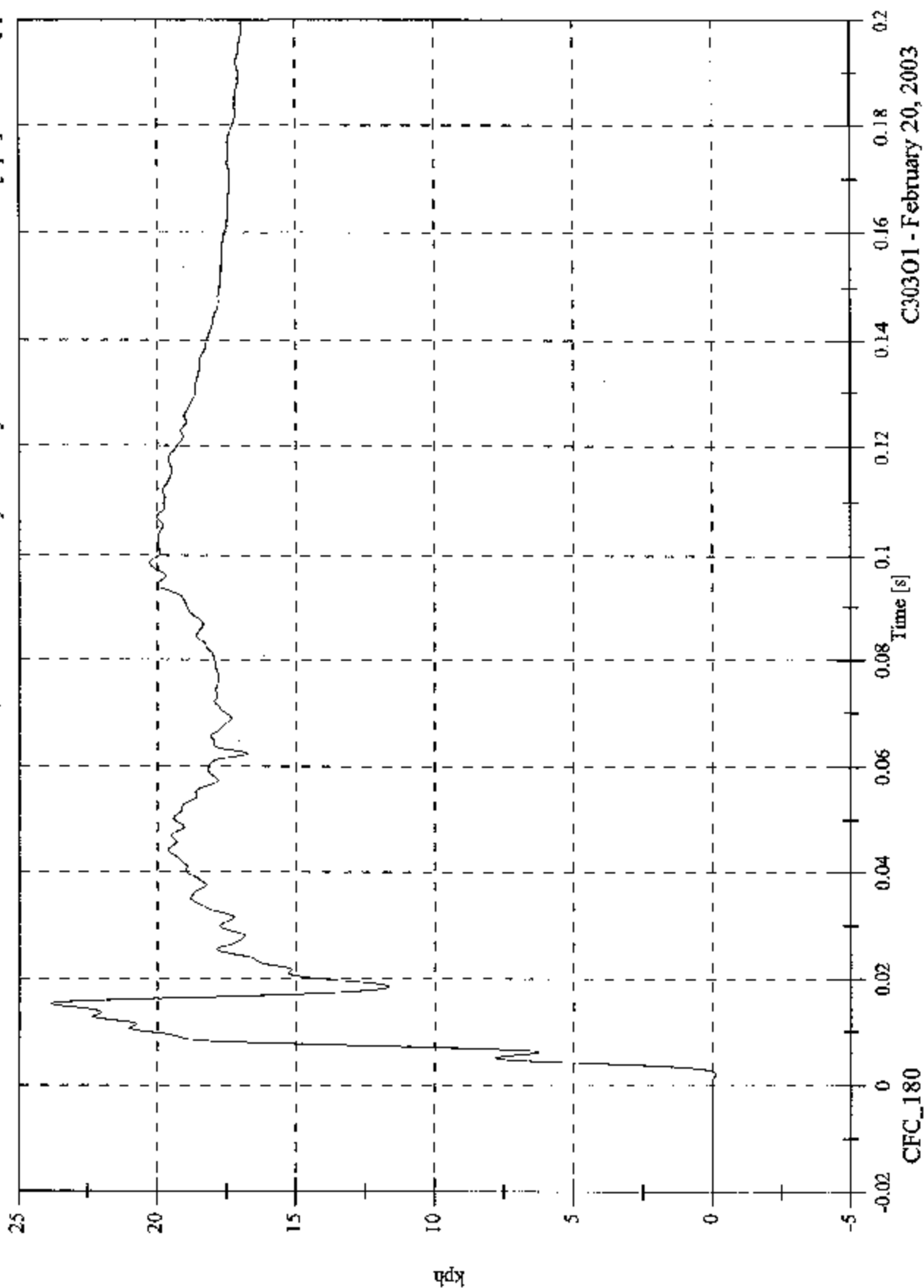


FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A12 Left Lower B Post y Velocity

Max: 23.9 [kph] at 0.015 [s]

Min: -0.1 [kph] at 0.002 [s]



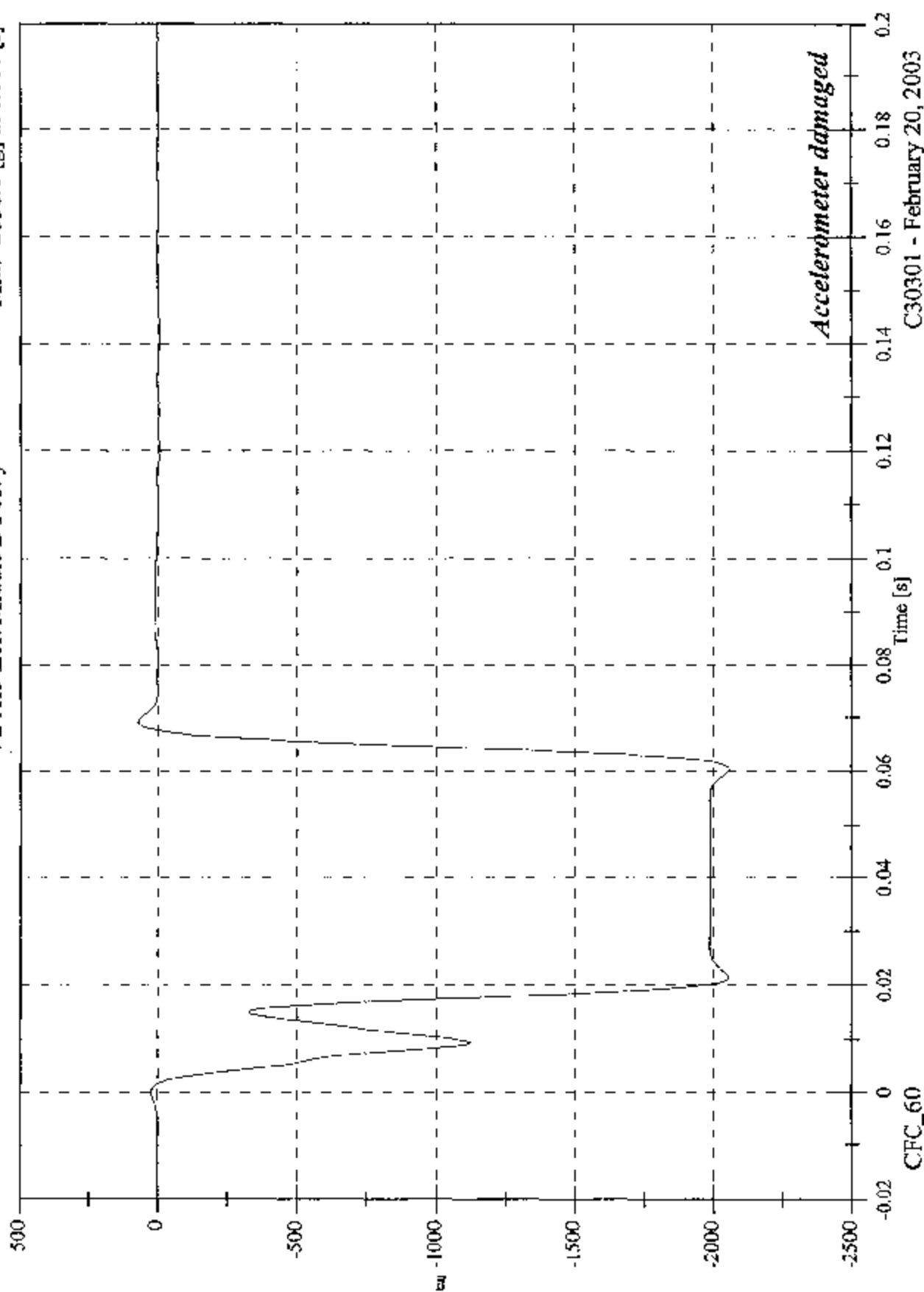
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 71.9 [g] at 0.069 [s]

V2 A13 Left Middle B Post y

Min: -2056.0 [g] at 0.060 [s]

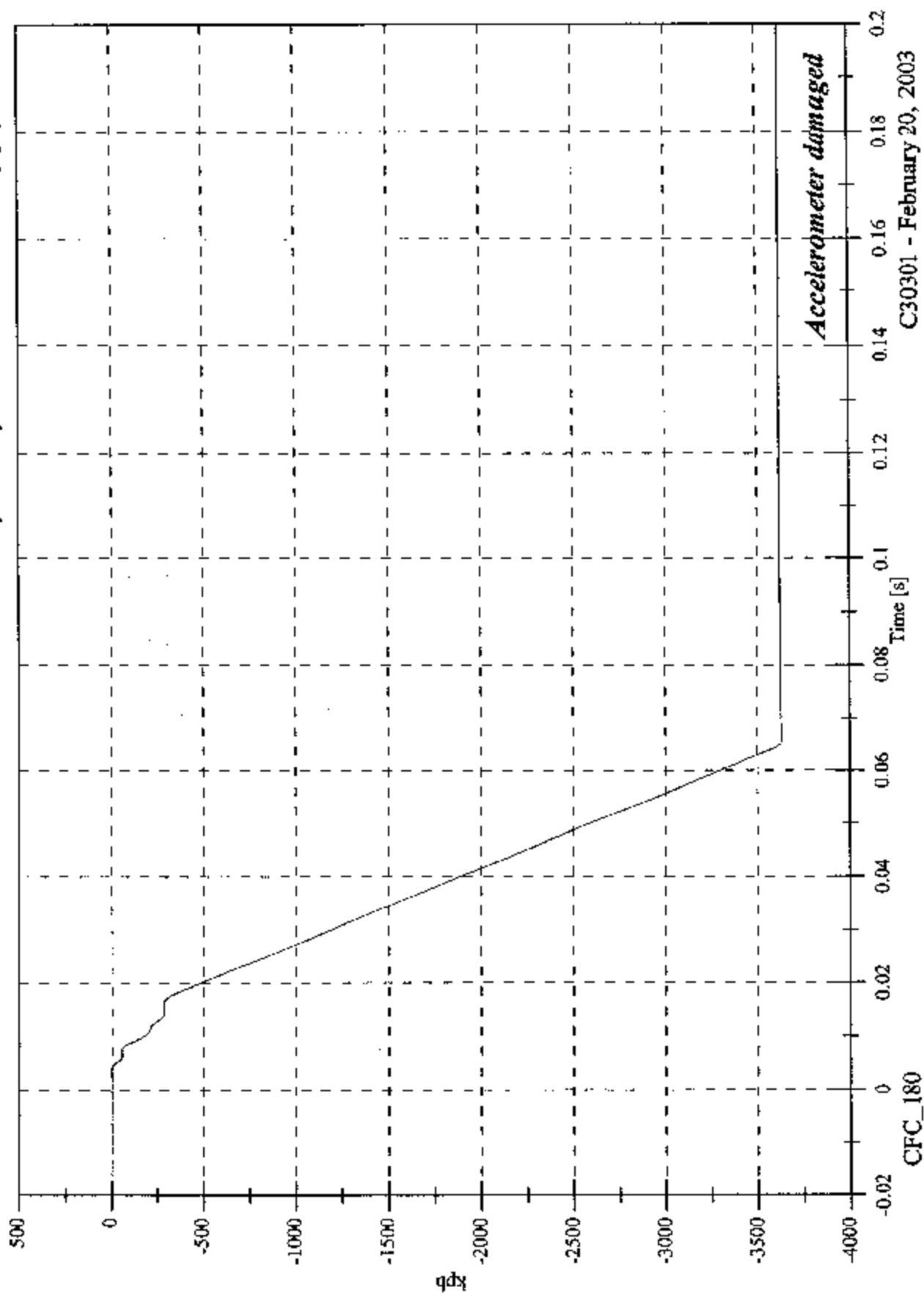


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 2.7 [kph] at 0.004 [s]
Min: -3630.1 [kph] at 0.066 [s]

V2 A13 Left Middle B Post y Velocity



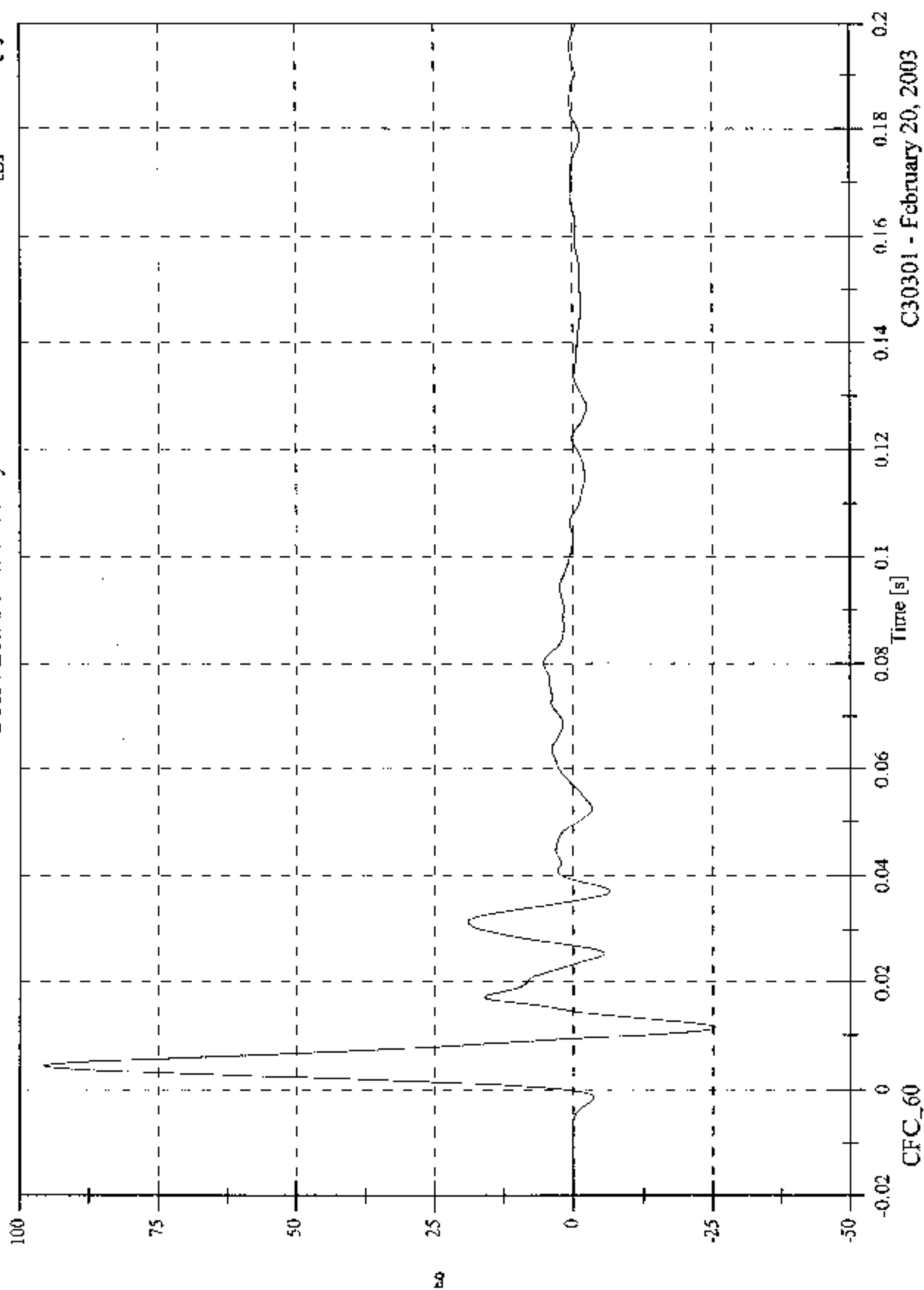
CFC_180

C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A14 Left Lower A Post y

Max: 95.6 [g] at 0.005 [s]
Min: -25.3 [g] at 0.011 [s]



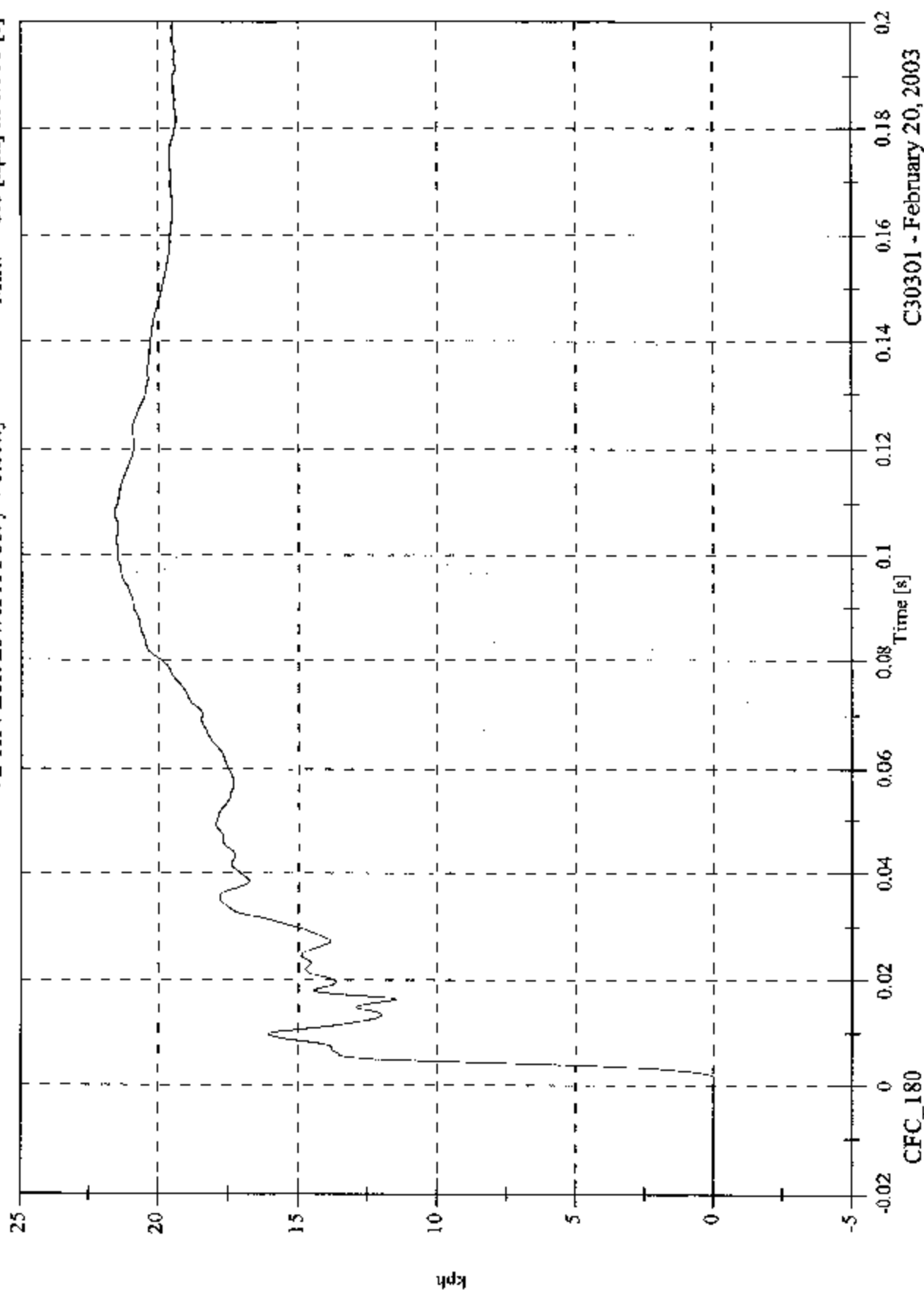
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 21.6 [kph] at 0.108 [s]

V2 A14 Left Lower A Post y Velocity

Min: -0.0 [kph] at 0.001 [s]

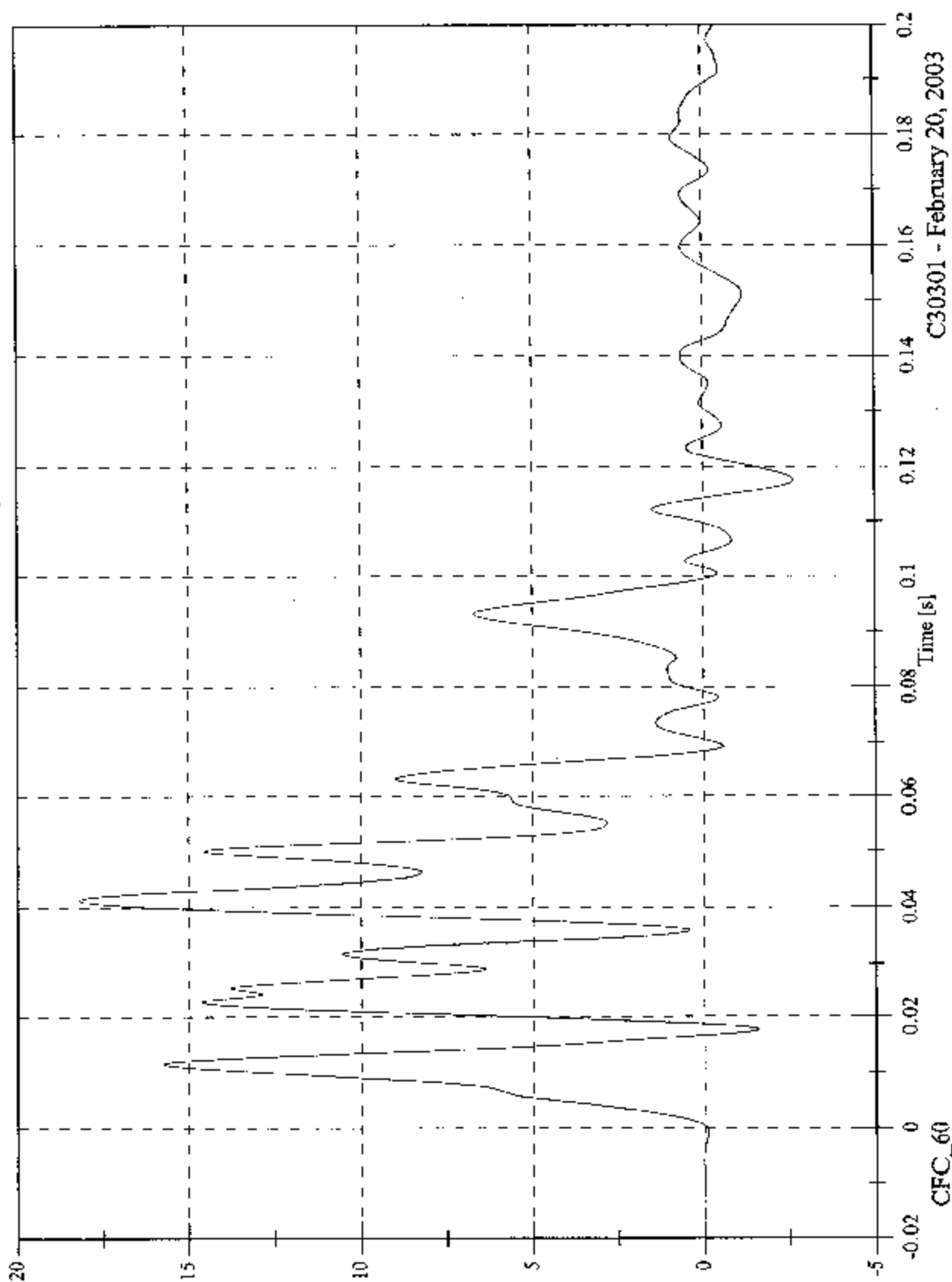


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A15 Left Mid A Post y

Max: 18.2 [g] at 0.041 [s]
Min: -2.7 [g] at 0.118 [s]

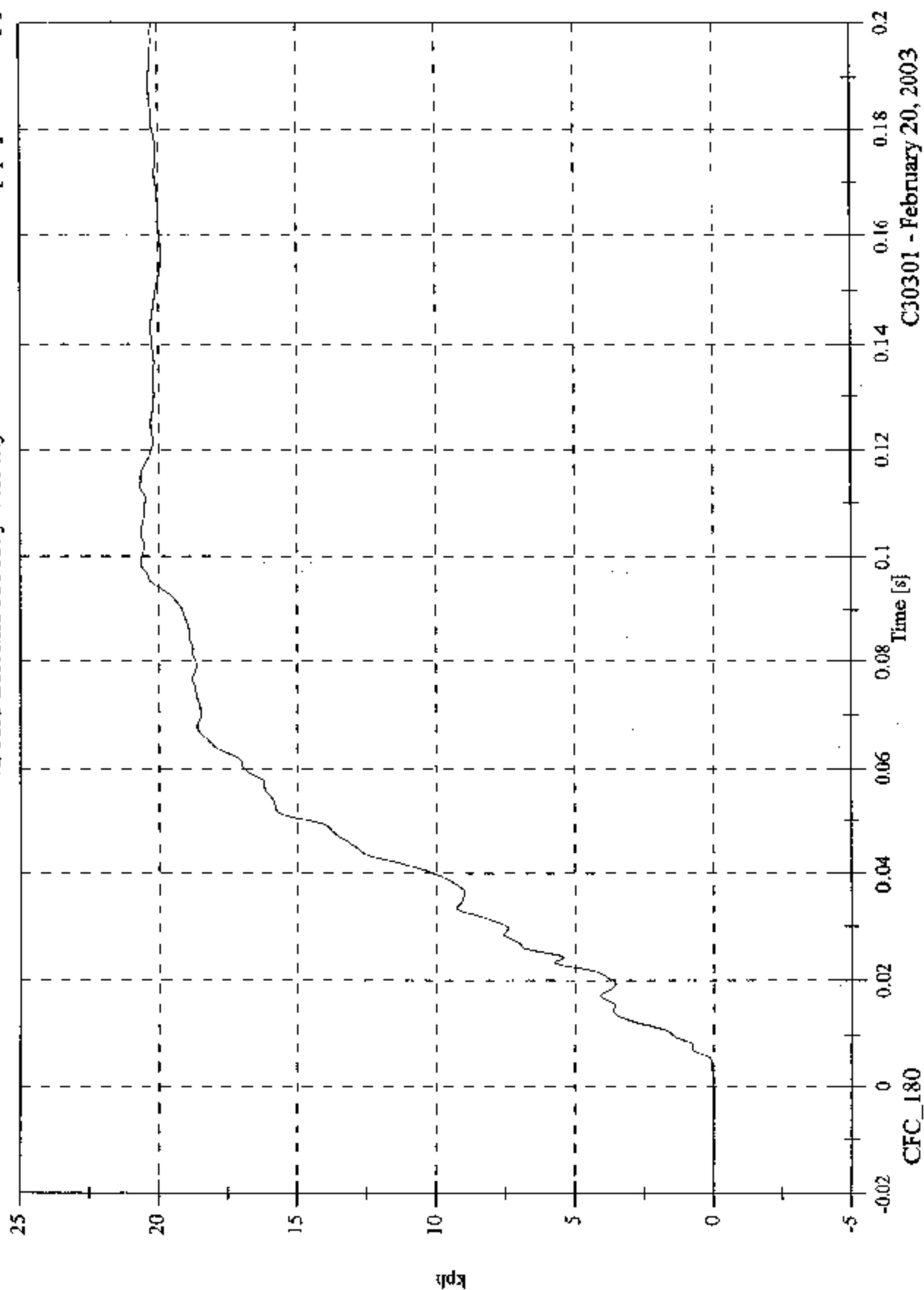


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 20.7 [kph] at 0.113 [s]
Min: -0.0 [kph] at -0.020 [s]

V2_A15 Left Mid A Post y Velocity

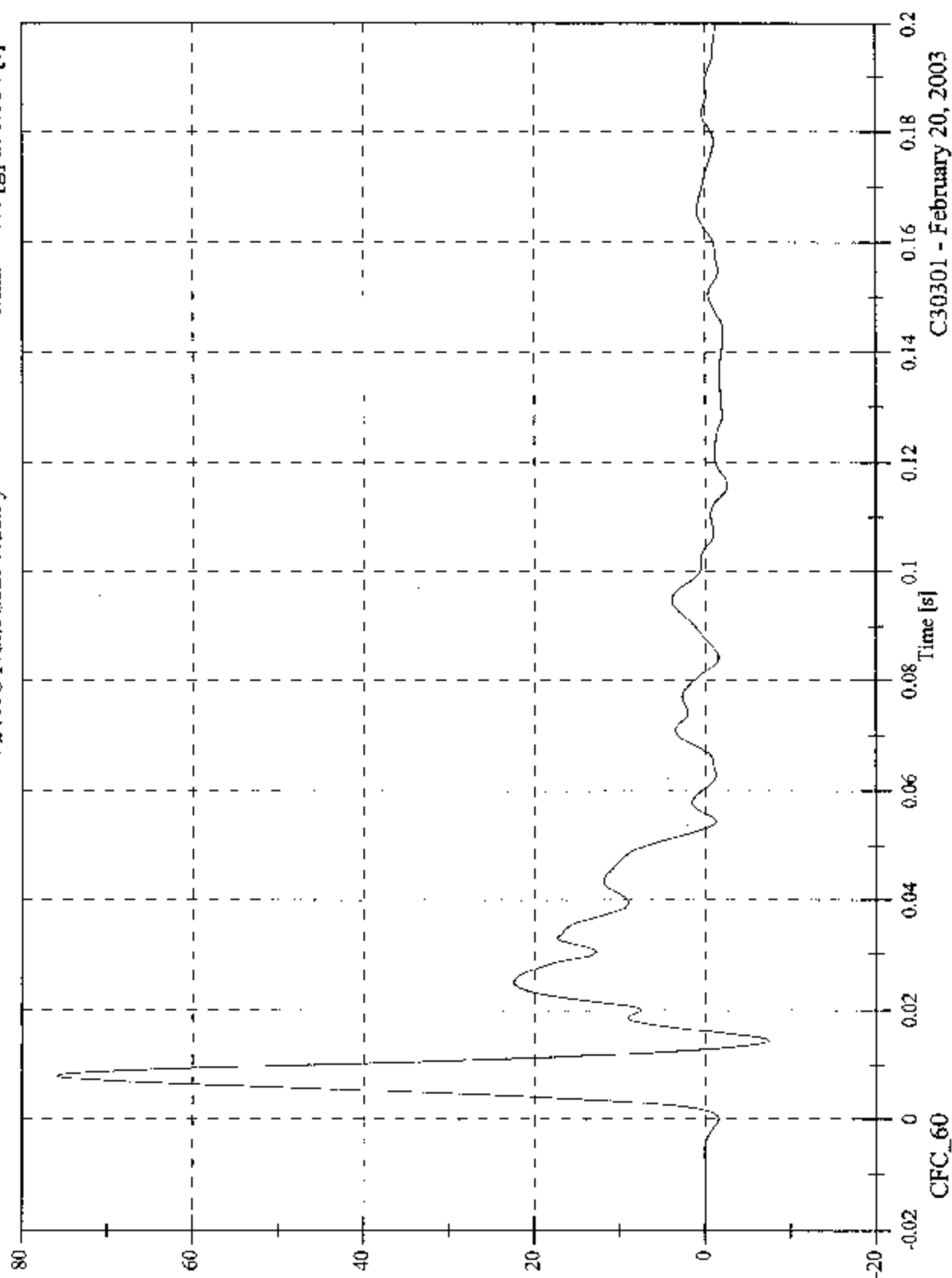


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A16 Front Seat Track y

Max: 75.8 [g] at 0.008 [s]
Min: -7.4 [g] at 0.014 [s]



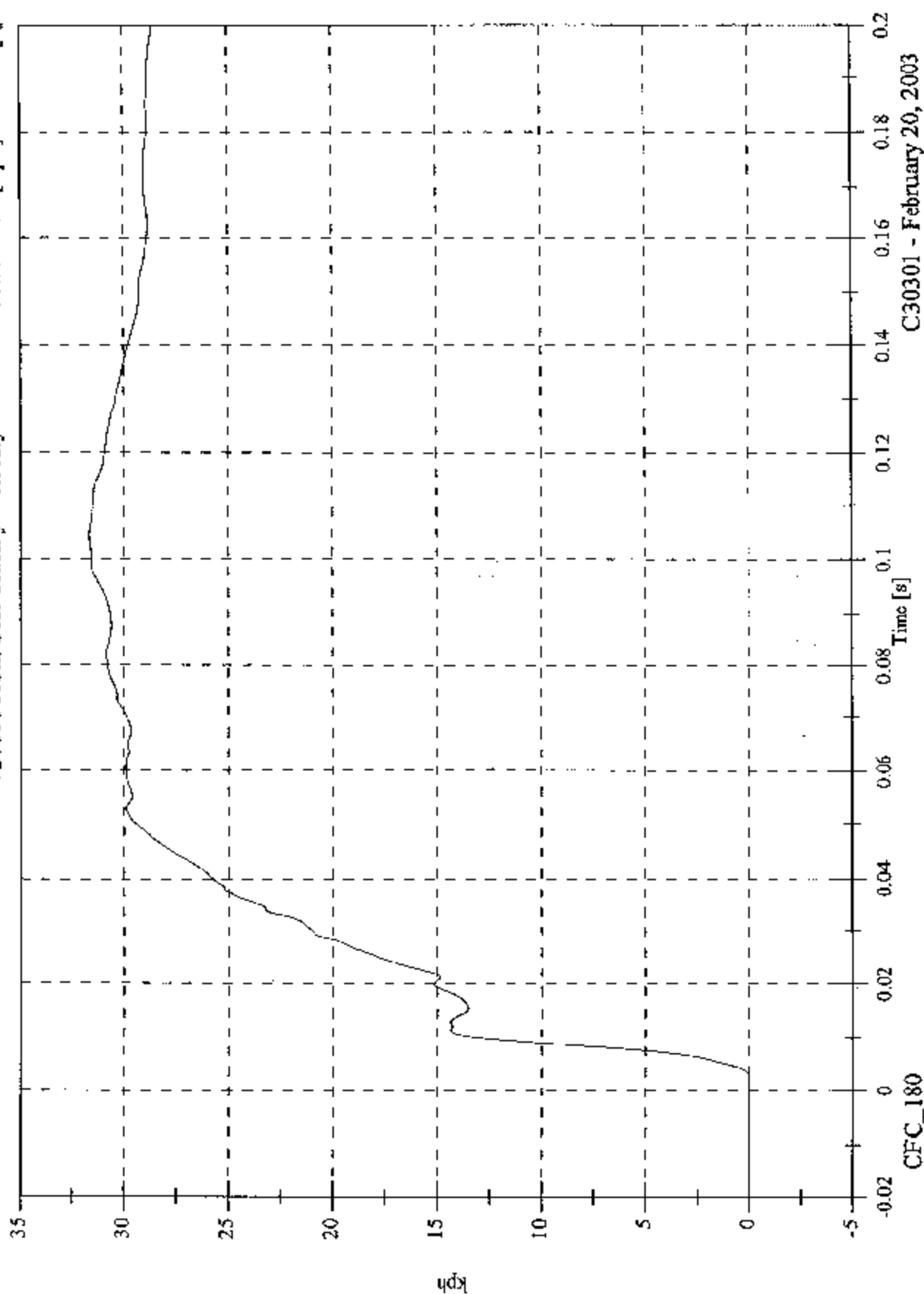
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 31.7 [kph] at 0.105 [s]

Min: -0.0 [kph] at 0.002 [s]

V2 A16 Front Seat Track y Velocity

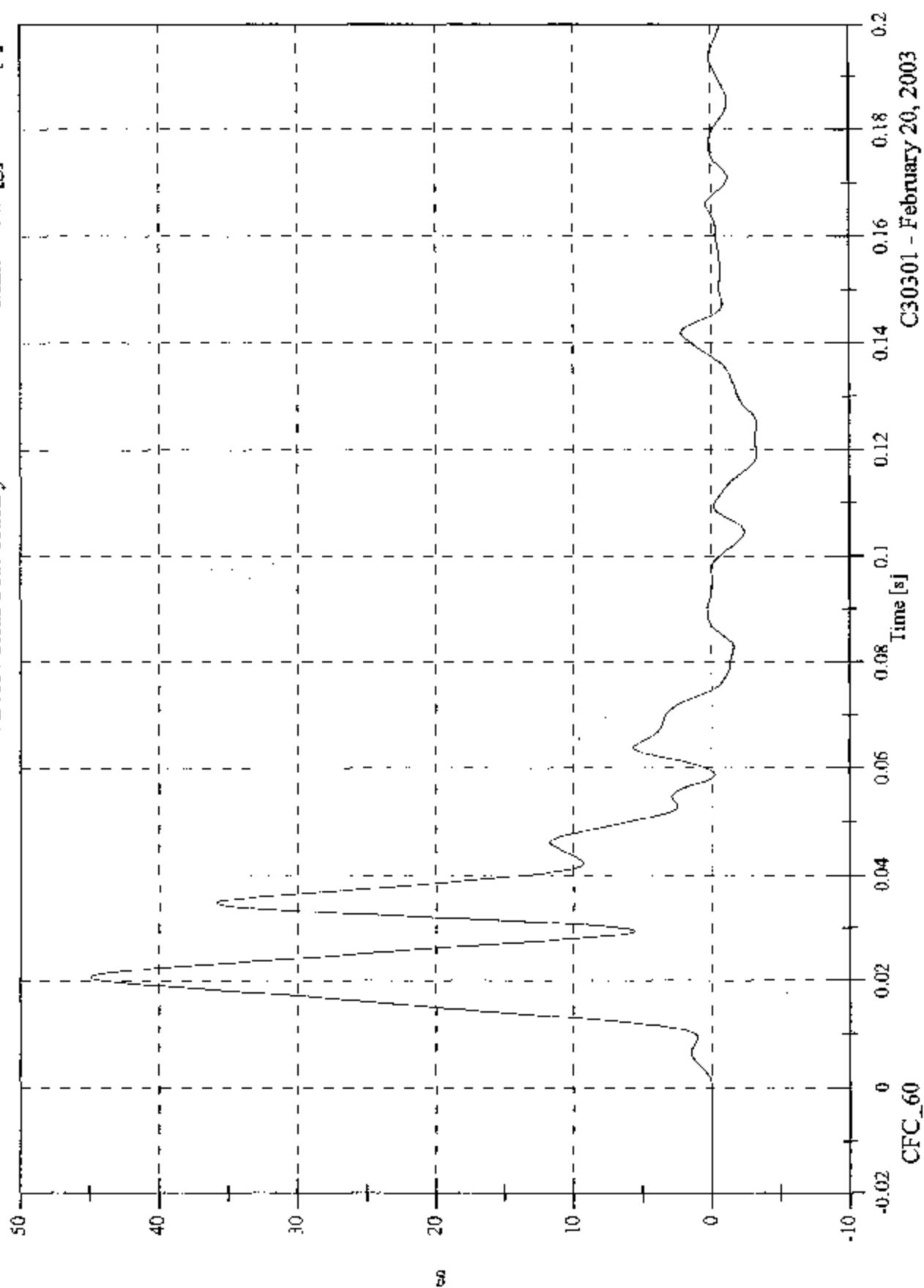


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A17 Rear Seat Track y

Max: 44.9 [g] at 0.021 [s]
Min: -3.3 [g] at 0.125 [s]



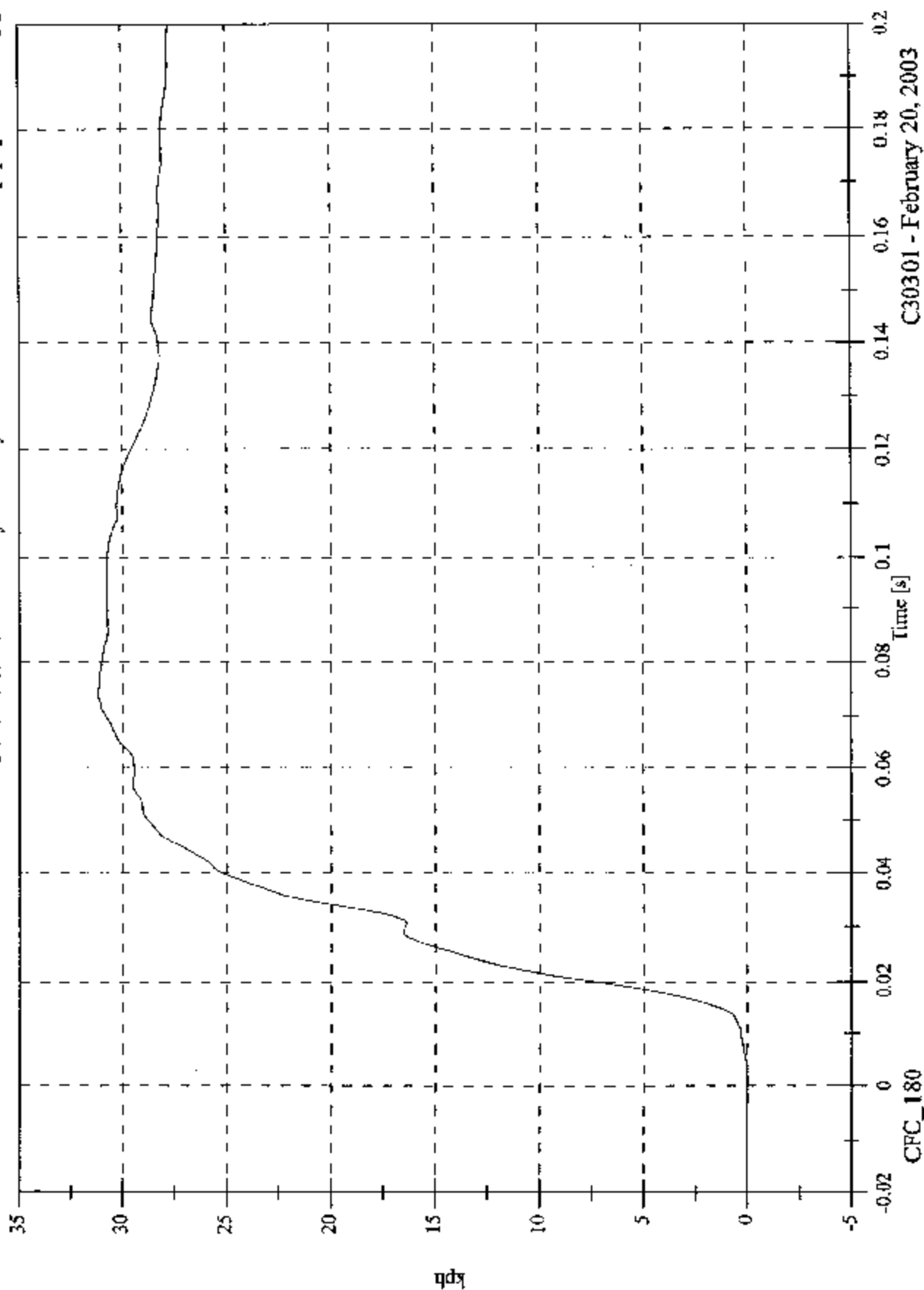
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 31.2 [kph] at 0.074 [s]

Min: -0.0 [kph] at -0.002 [s]

V2 A17 Rear Seat Track y Velocity



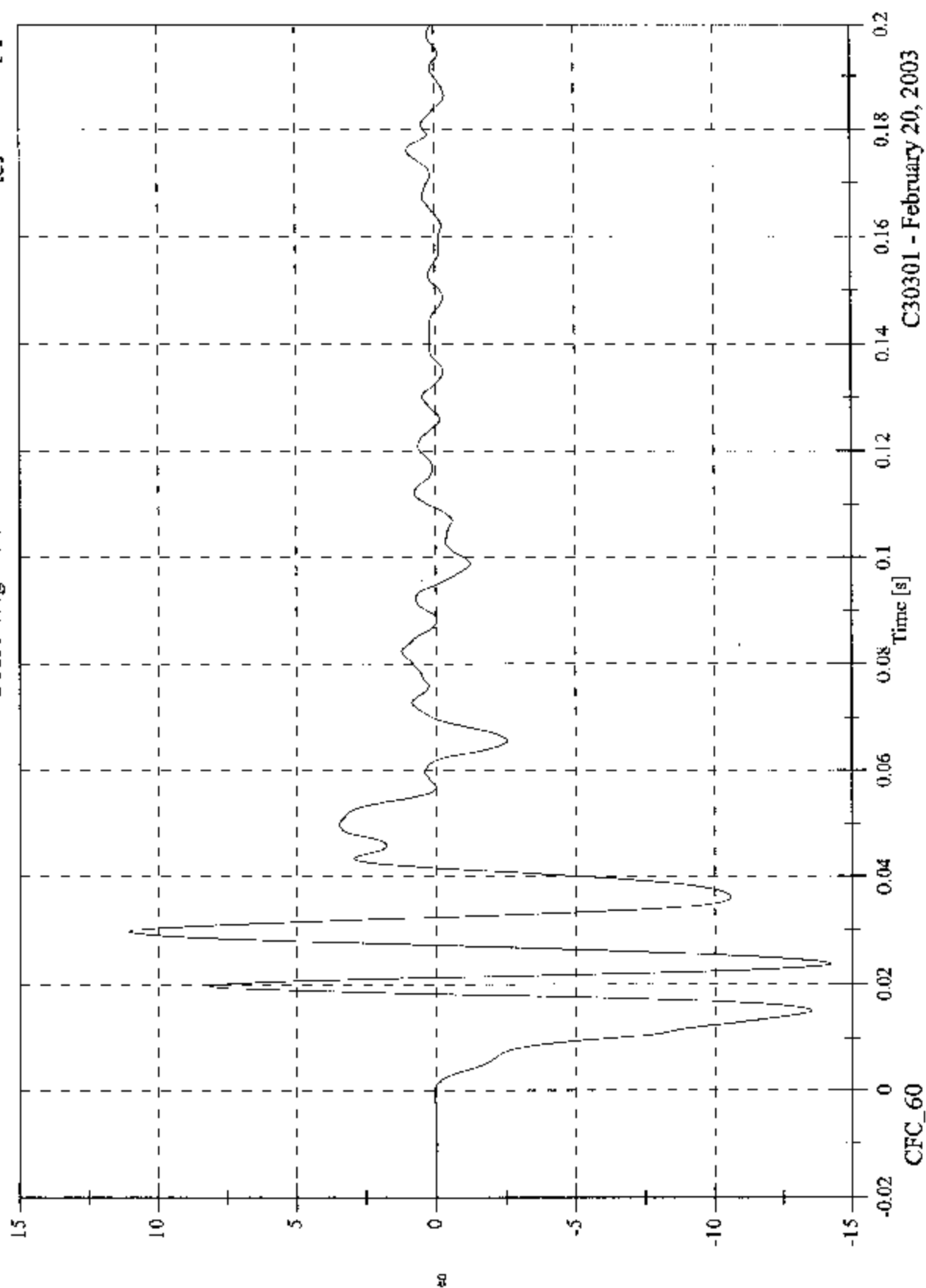
CFC_180

C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A18 Target CG x

Max: 11.1 [g] at 0.030 [s]
Min: -14.2 [g] at 0.024 [s]

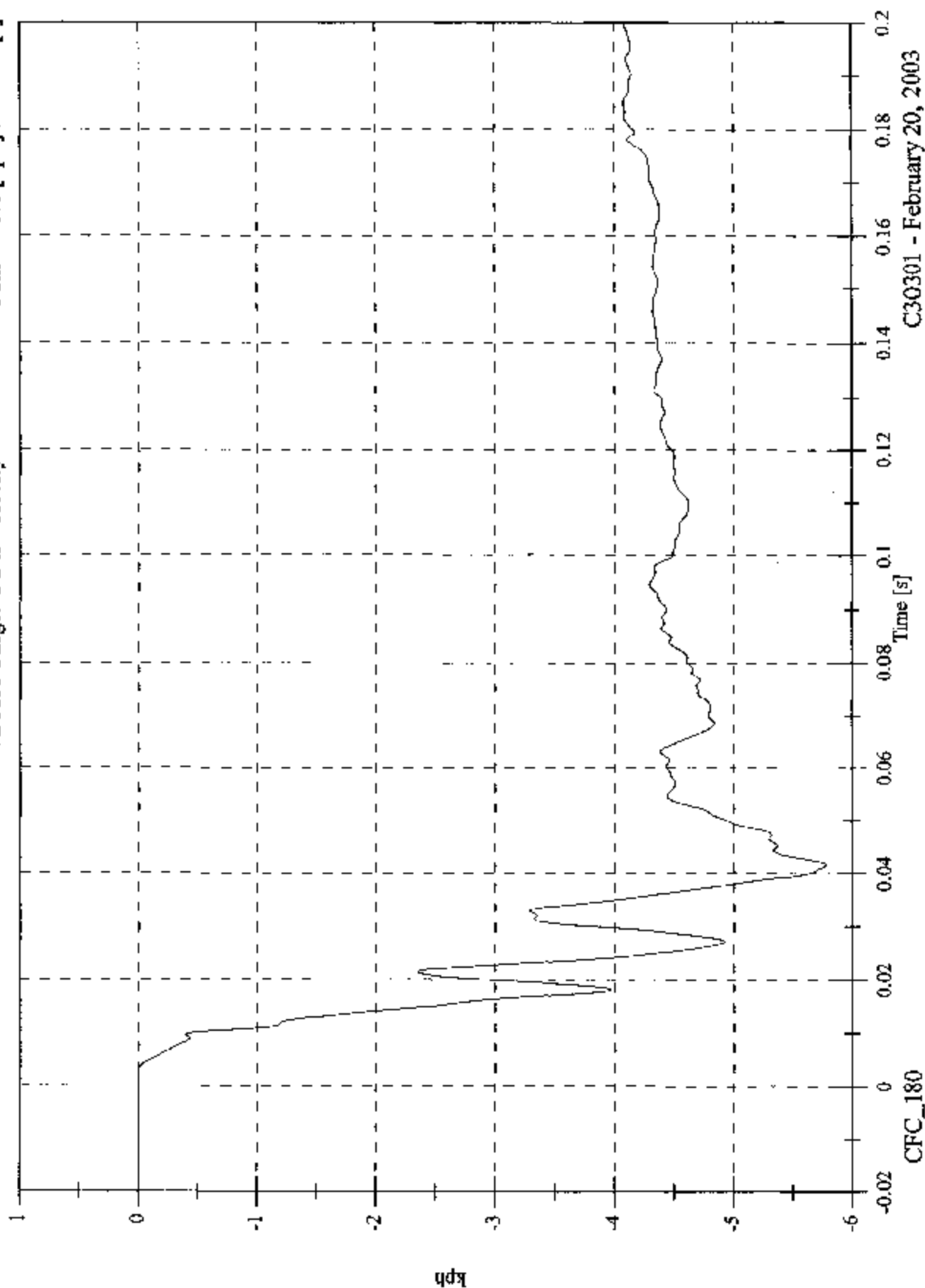


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 0.0 [kph] at 0.003 [s]
Mfm: -5.8 [kph] at 0.042 [s]

V2 A18 Target CG x Velocity

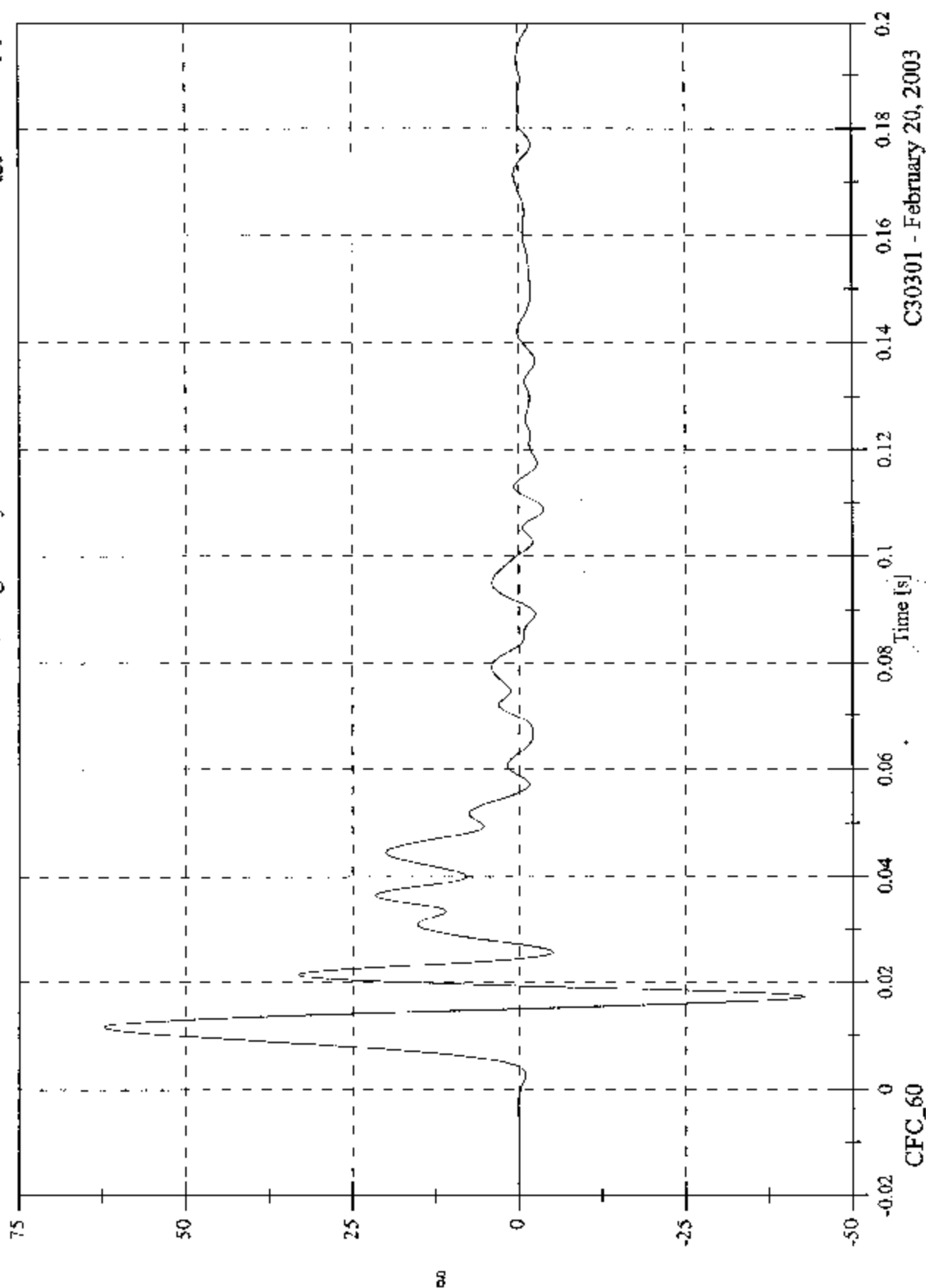


FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A18 Target CG y

Max: 62.2 [g] at 0.012 [s]

Min: -42.8 [g] at 0.017 [s]

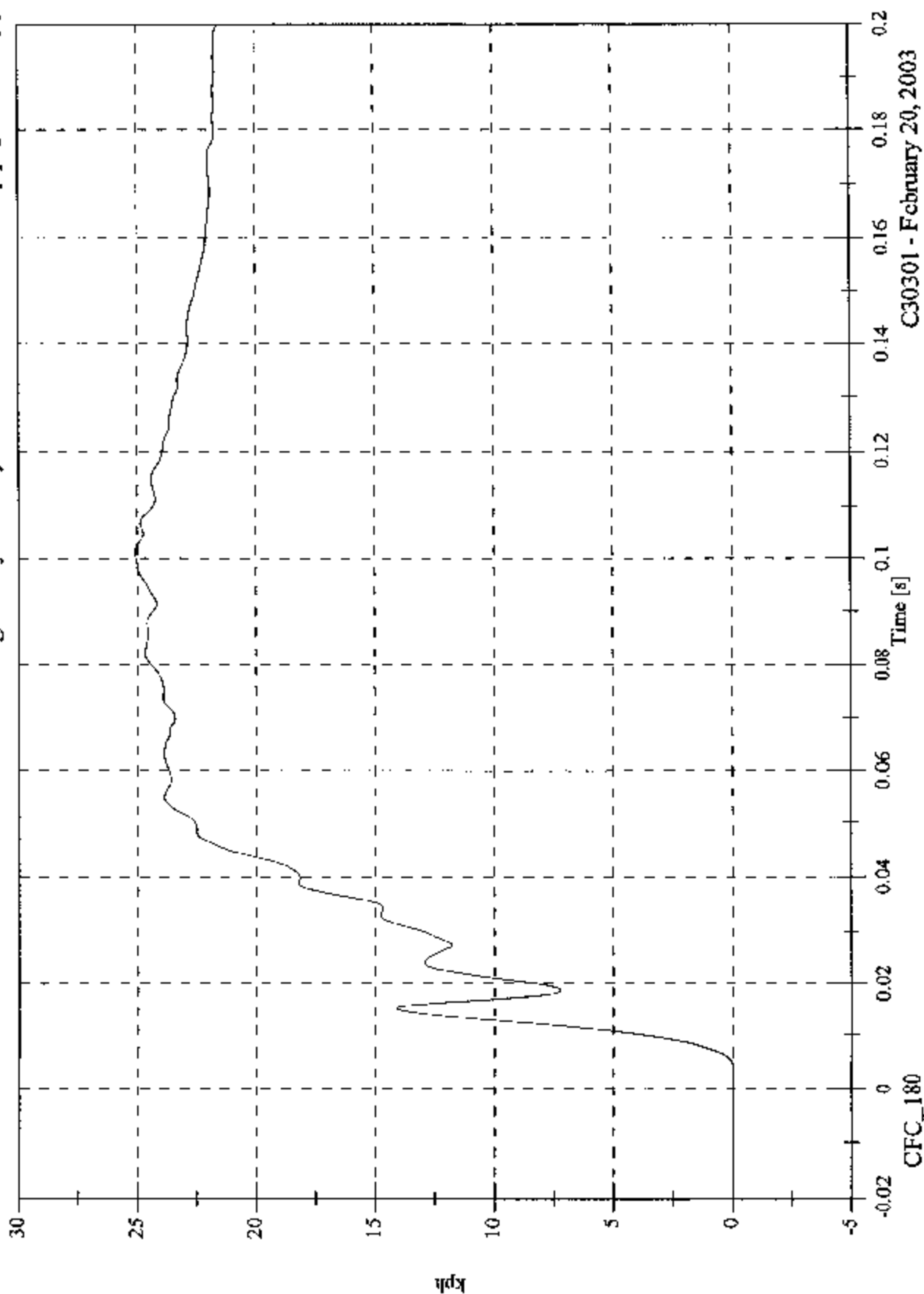


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 25.1 [kph] at 0.101 [s]
Min: -0.0 [kph] at -0.017 [s]

V2 A18 Target CG y Velocity

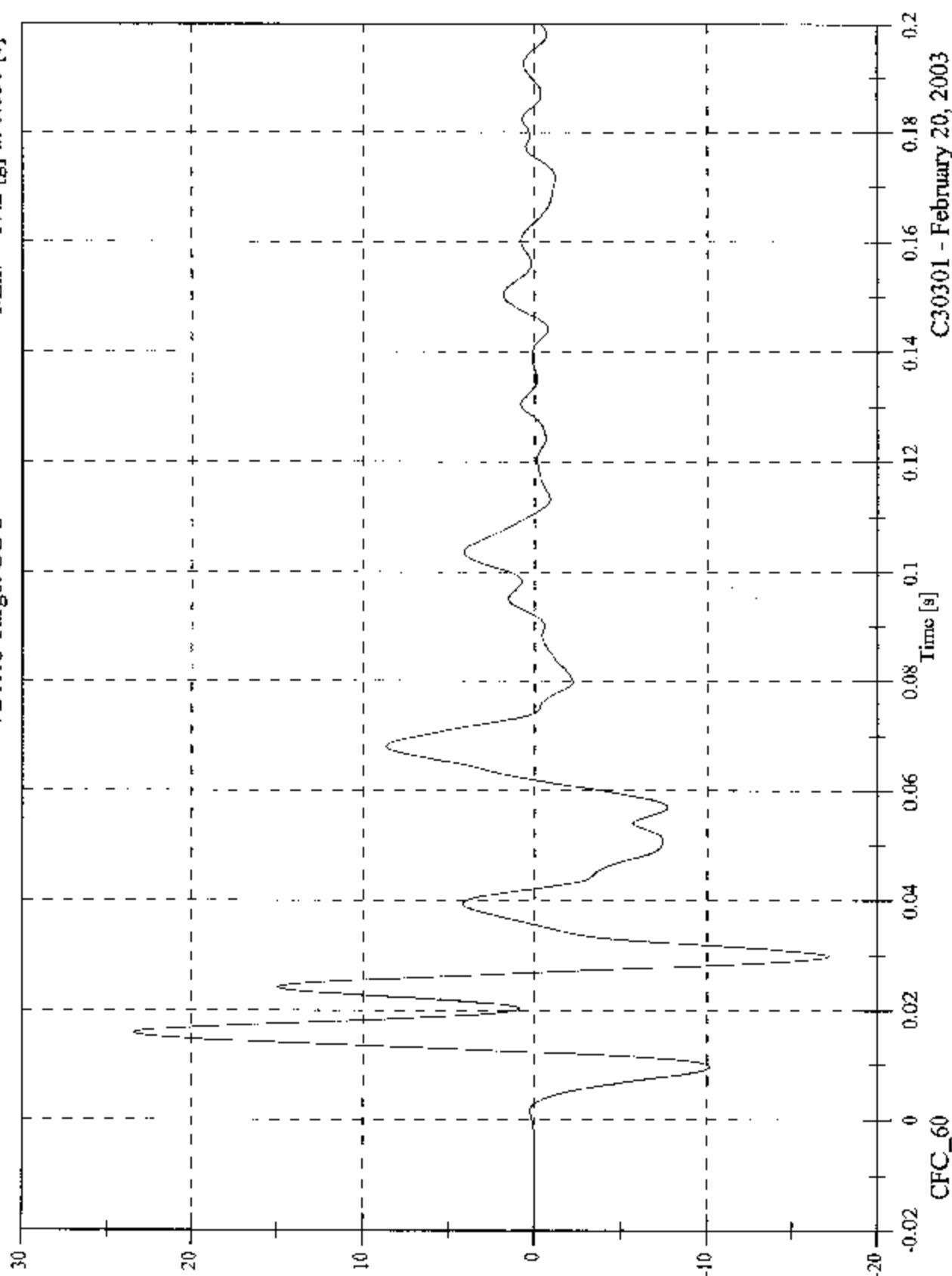


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A18 Target CG z

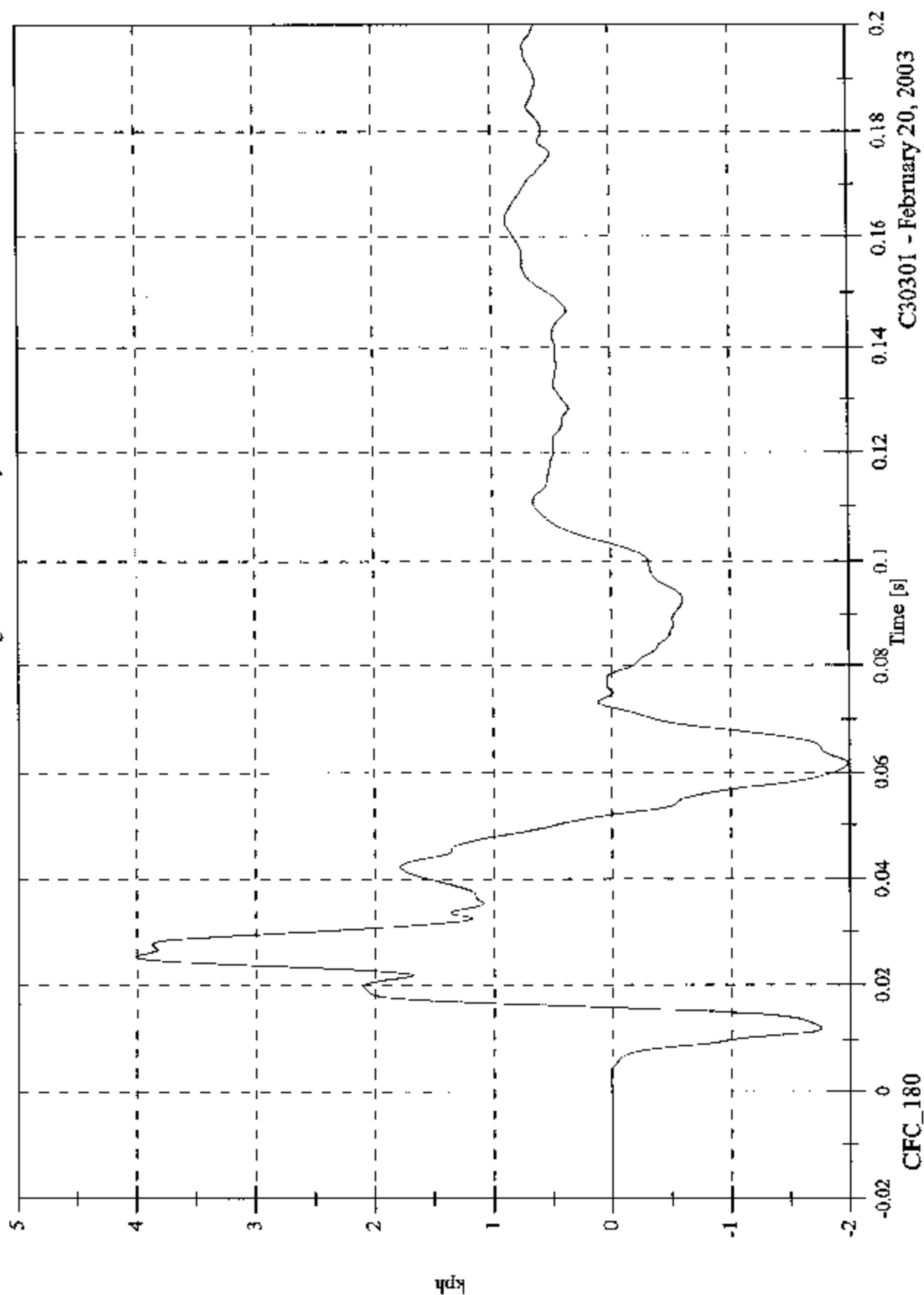
Max: 23.4 [g] at 0.016 [s]
Min: -17.2 [g] at 0.030 [s]



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Max: 4.0 [kph] at 0.025 [s]
Min: -2.0 [kph] at 0.062 [s]

V2 A18 Target CG z Velocity



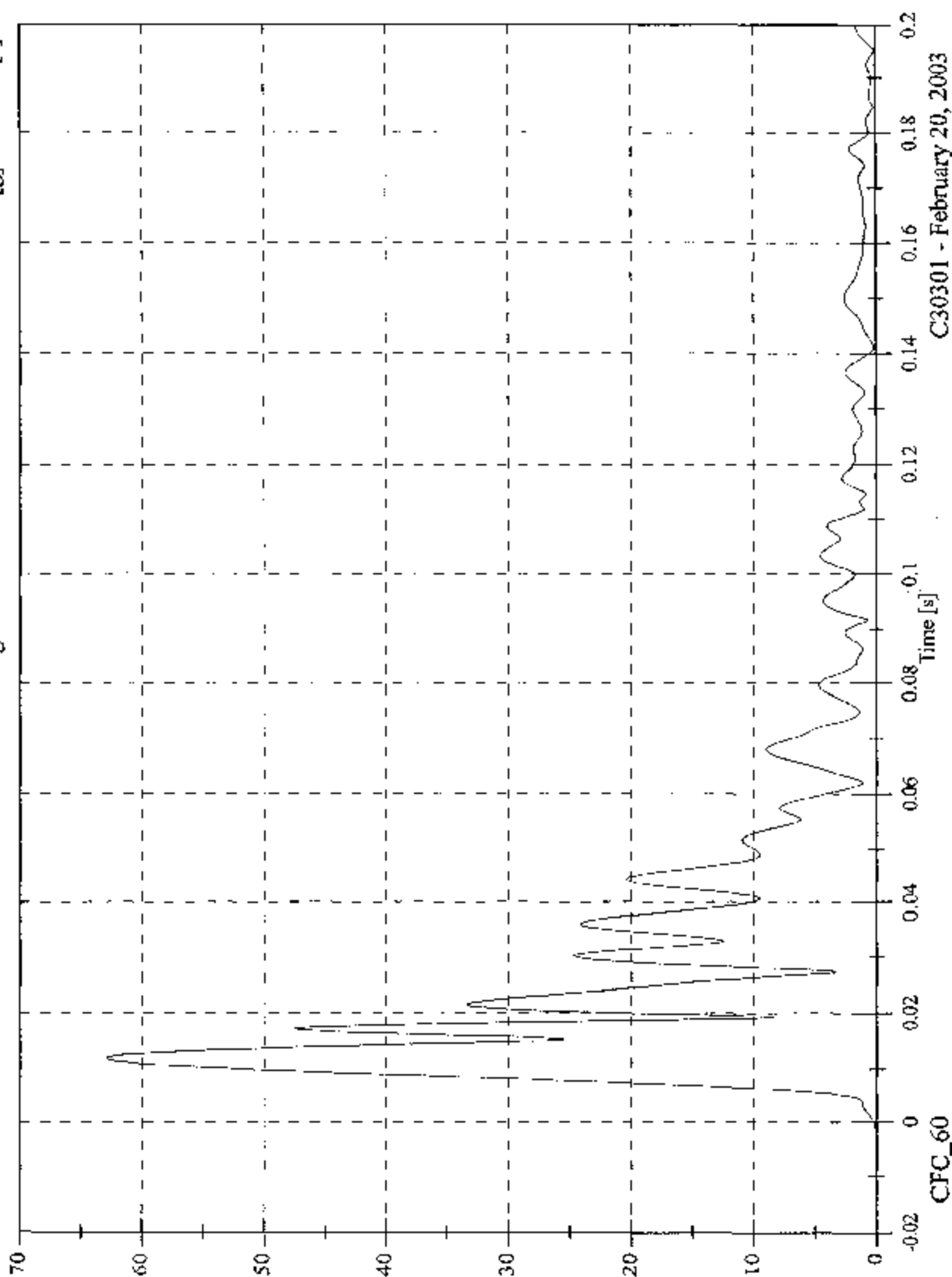
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2 A18 Target CG Resultant

Max: 62.9 [g] at 0.012 [s]

Min: 0.0 [g] at -0.016 [s]

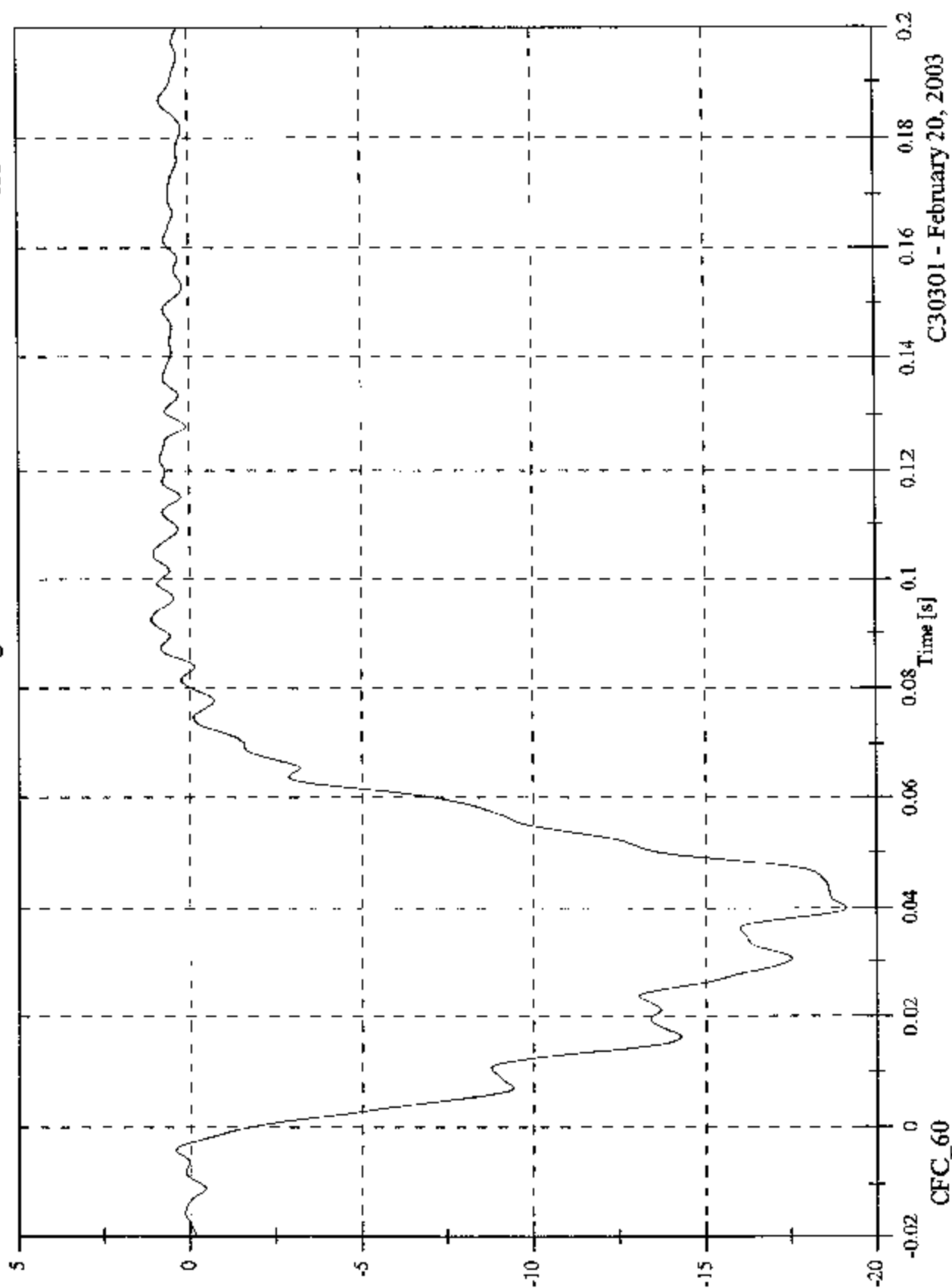


FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 1.1 [g] at 0.093 [s]

Min: -19.1 [g] at 0.040 [s]

V1 Moving Barrier CG X



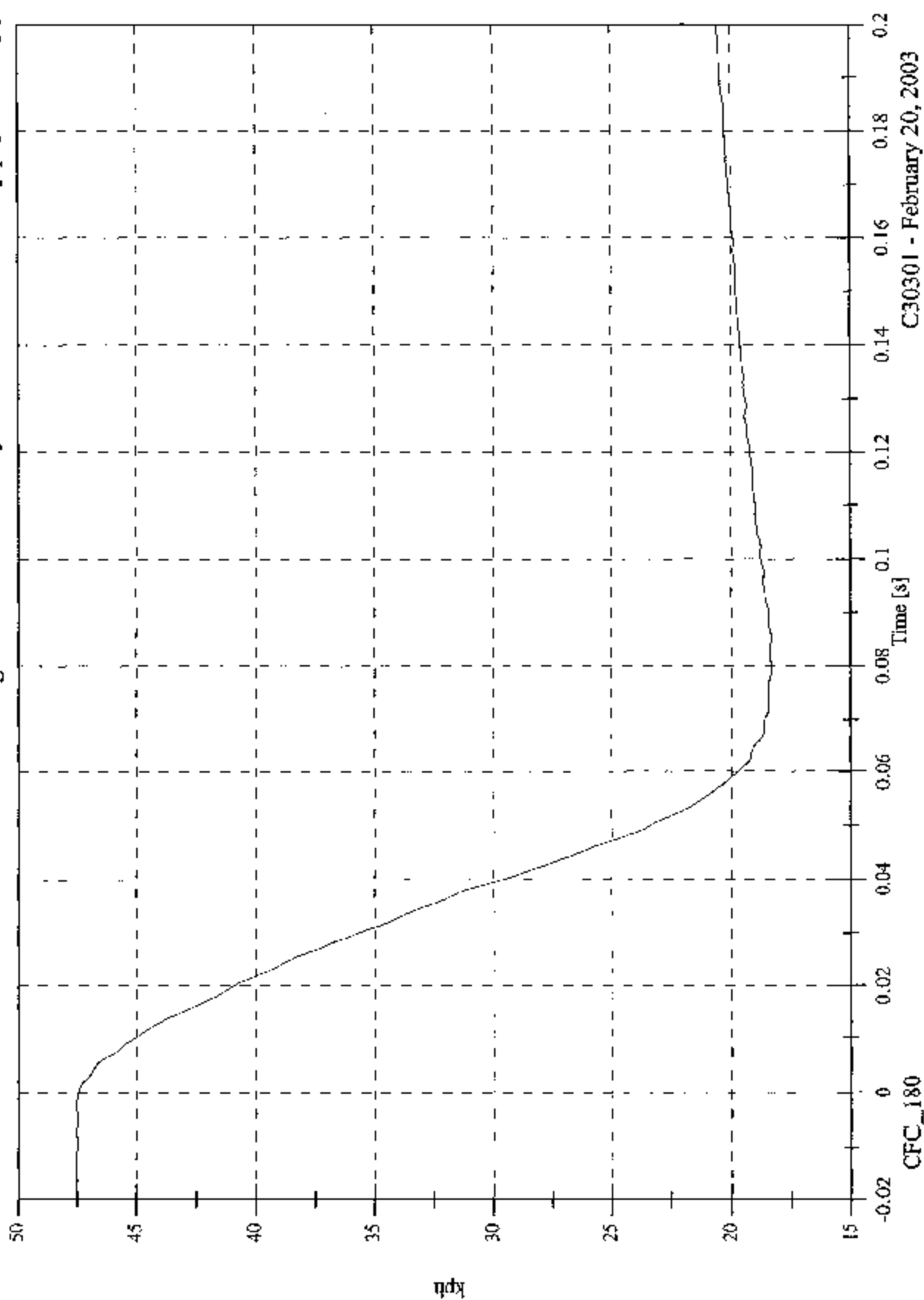
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 47.6 [kph] at -0.003 [s]

Min: 18.3 [kph] at 0.085 [s]

V1 Moving Barrier CG X Velocity

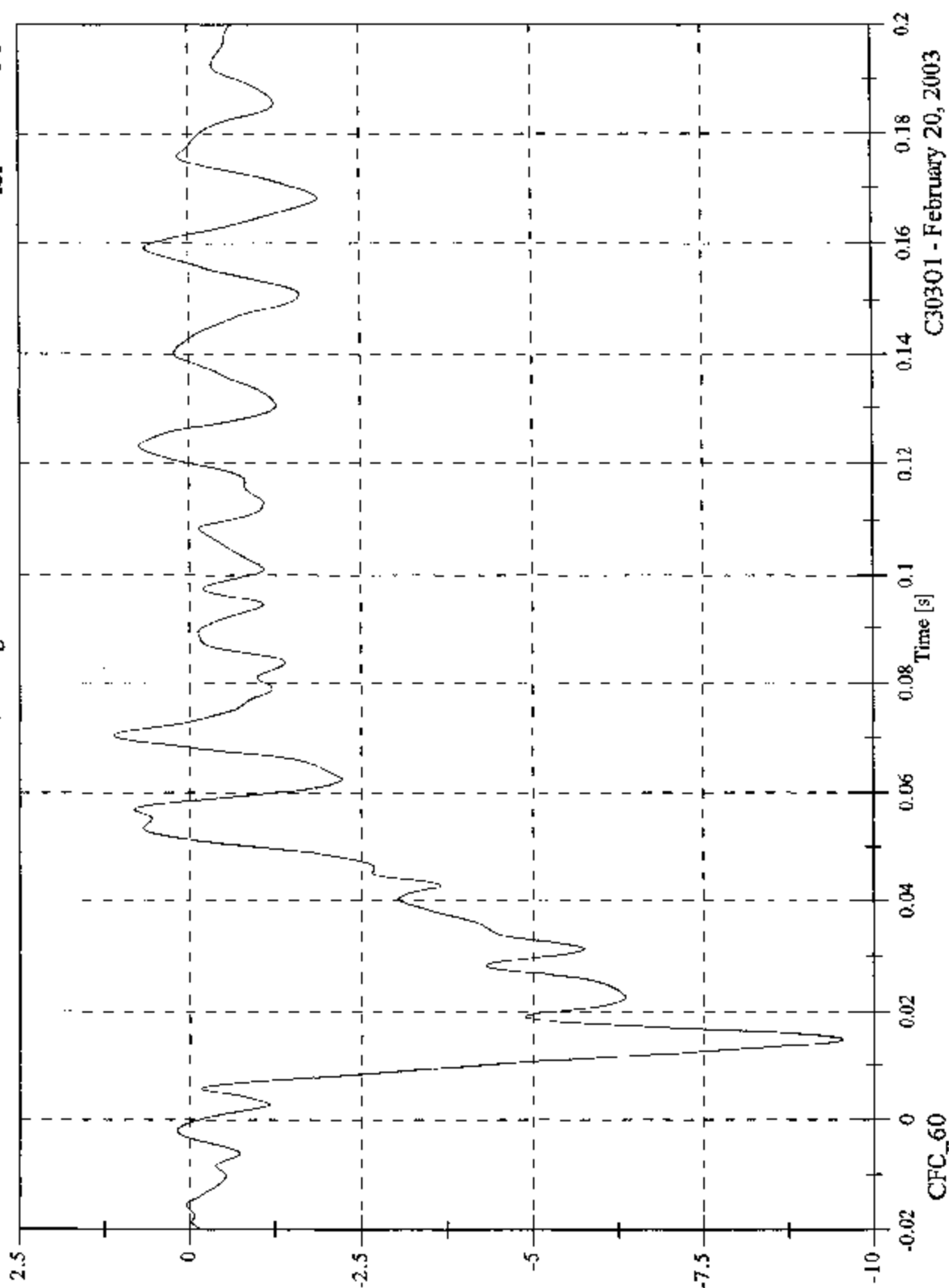


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FMVSS 214D - 2003 Chrysler PT Cruiser

V1 Moving Barrier CG Y

Max: 1.1 [g] at 0.070 [s]
Min: -9.5 [g] at 0.015 [s]



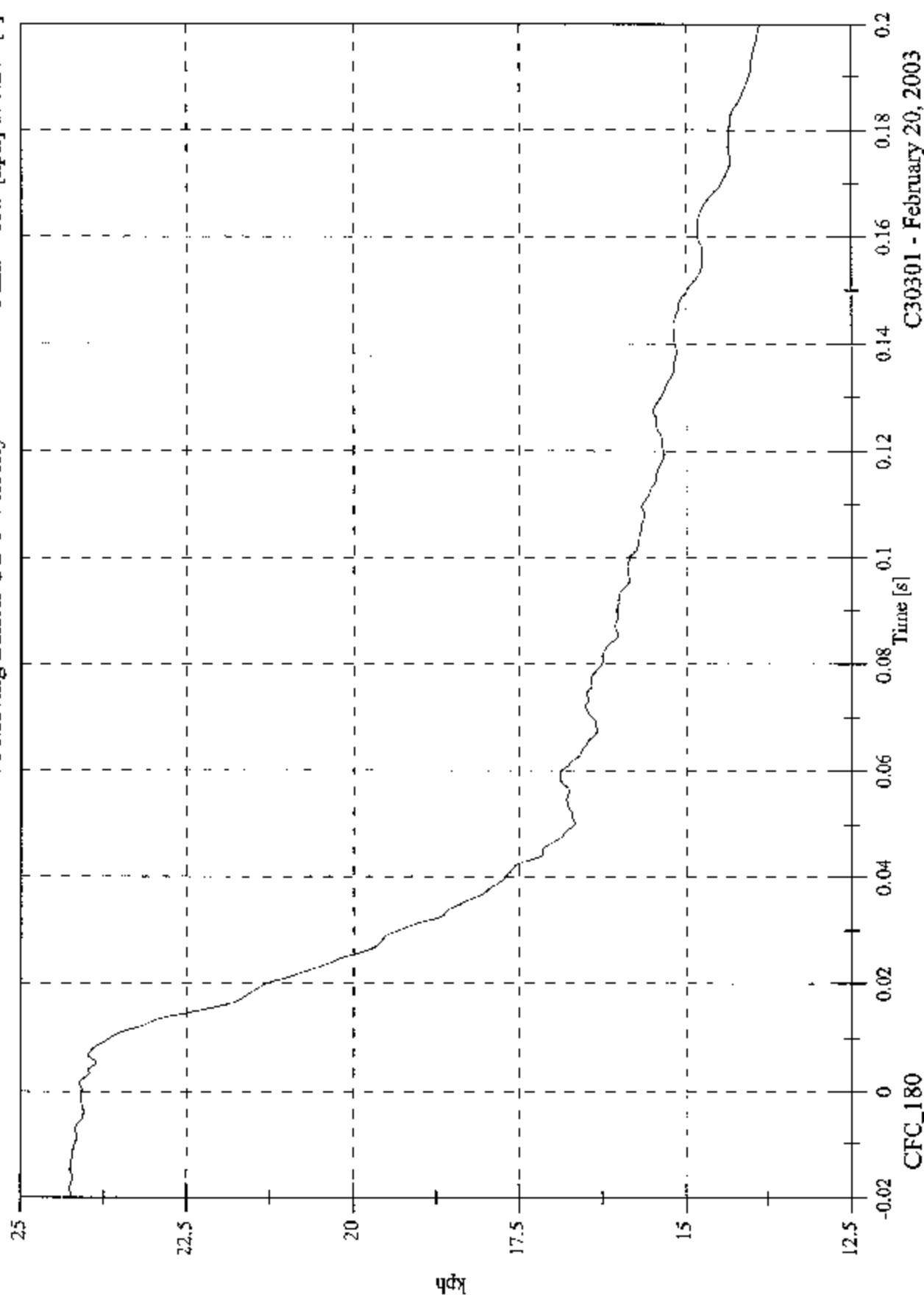
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 24.3 [kph] at -0.018 [s]

V1 Moving Barrier CG Y Velocity

Min: 13.9 [kph] at 0.200 [s]

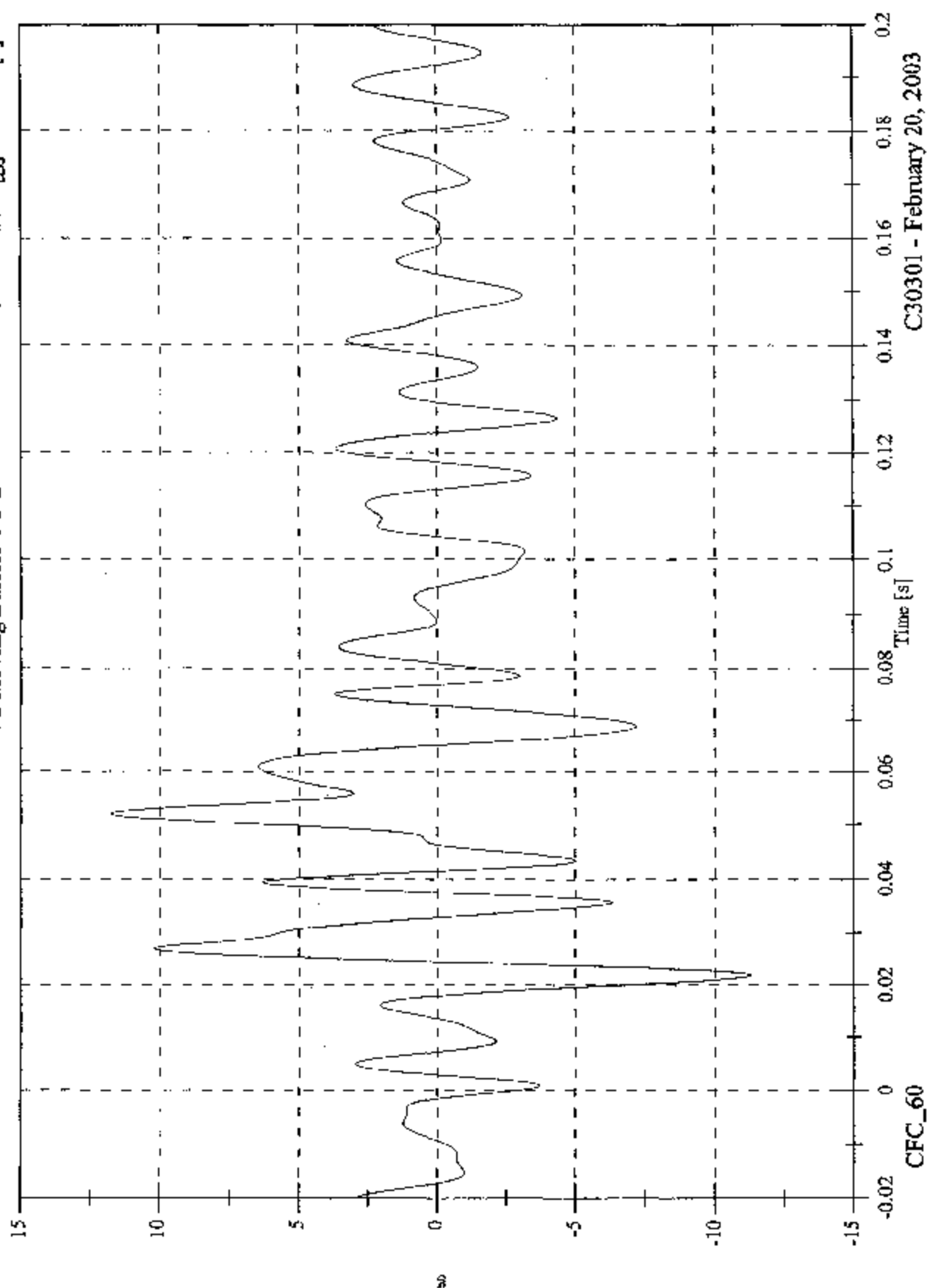


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V1 Moving Barrier CG Z

Max: 11.8 [g] at 0.052 [s]
Min: -11.3 [g] at 0.022 [s]

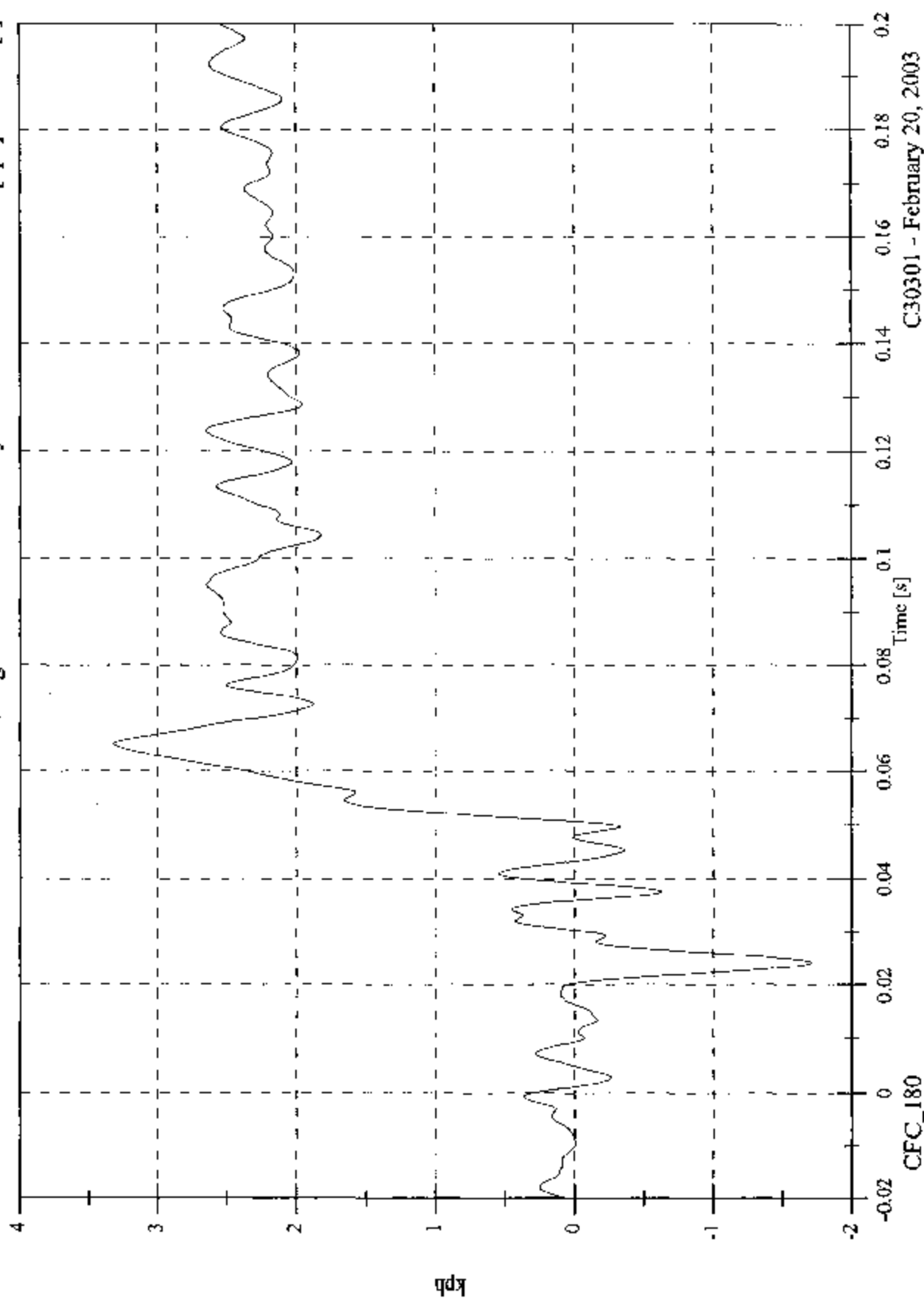


FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 3.3 [kph] at 0.065 [s]

Min: -1.7 [kph] at 0.024 [s]

VI Moving Barrier CG Z Velocity

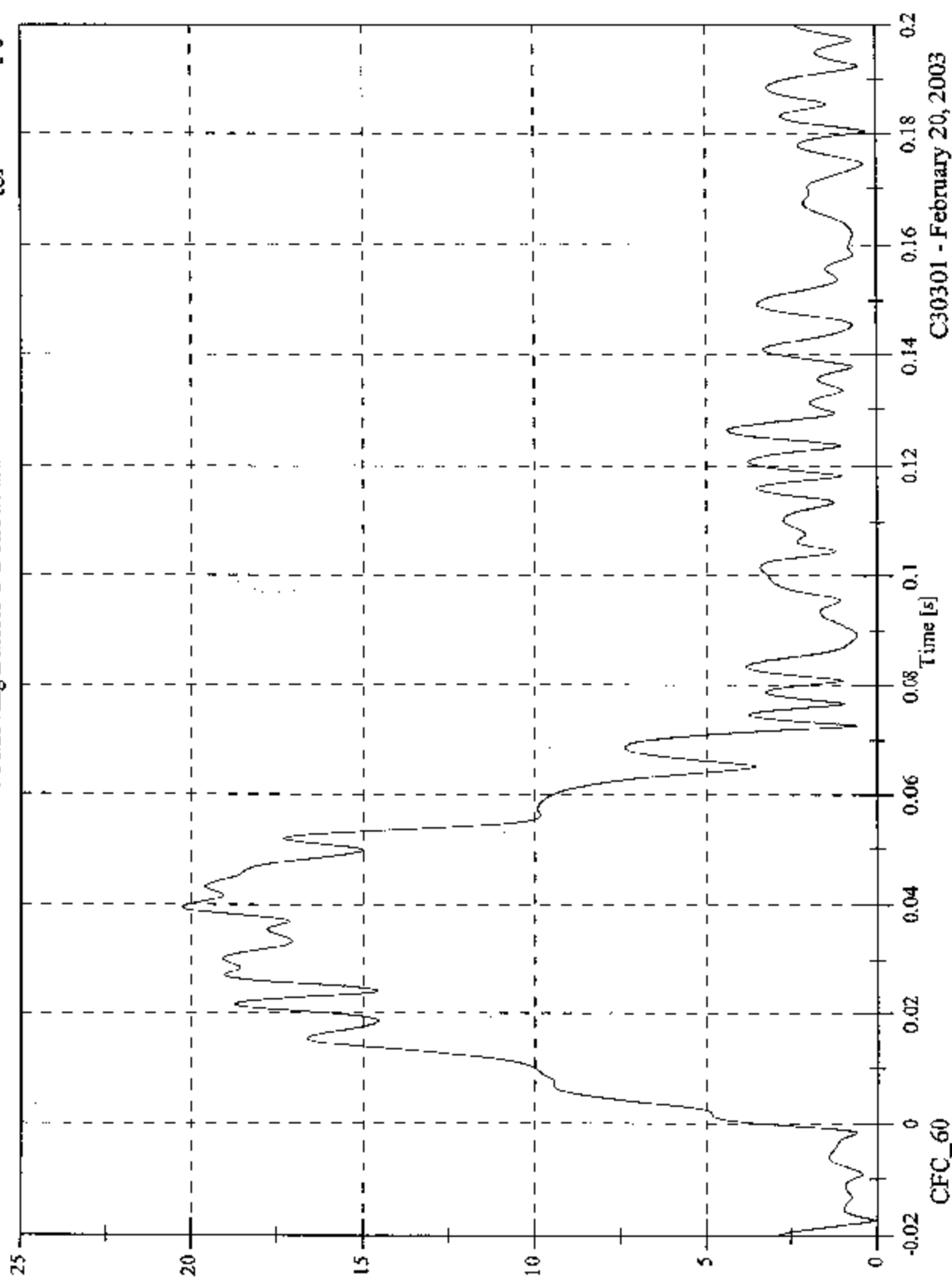


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FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 20.3 [g] at 0.039 [s]
Min: 0.1 [g] at -0.017 [s]

VI Moving Barrier CG Resultant

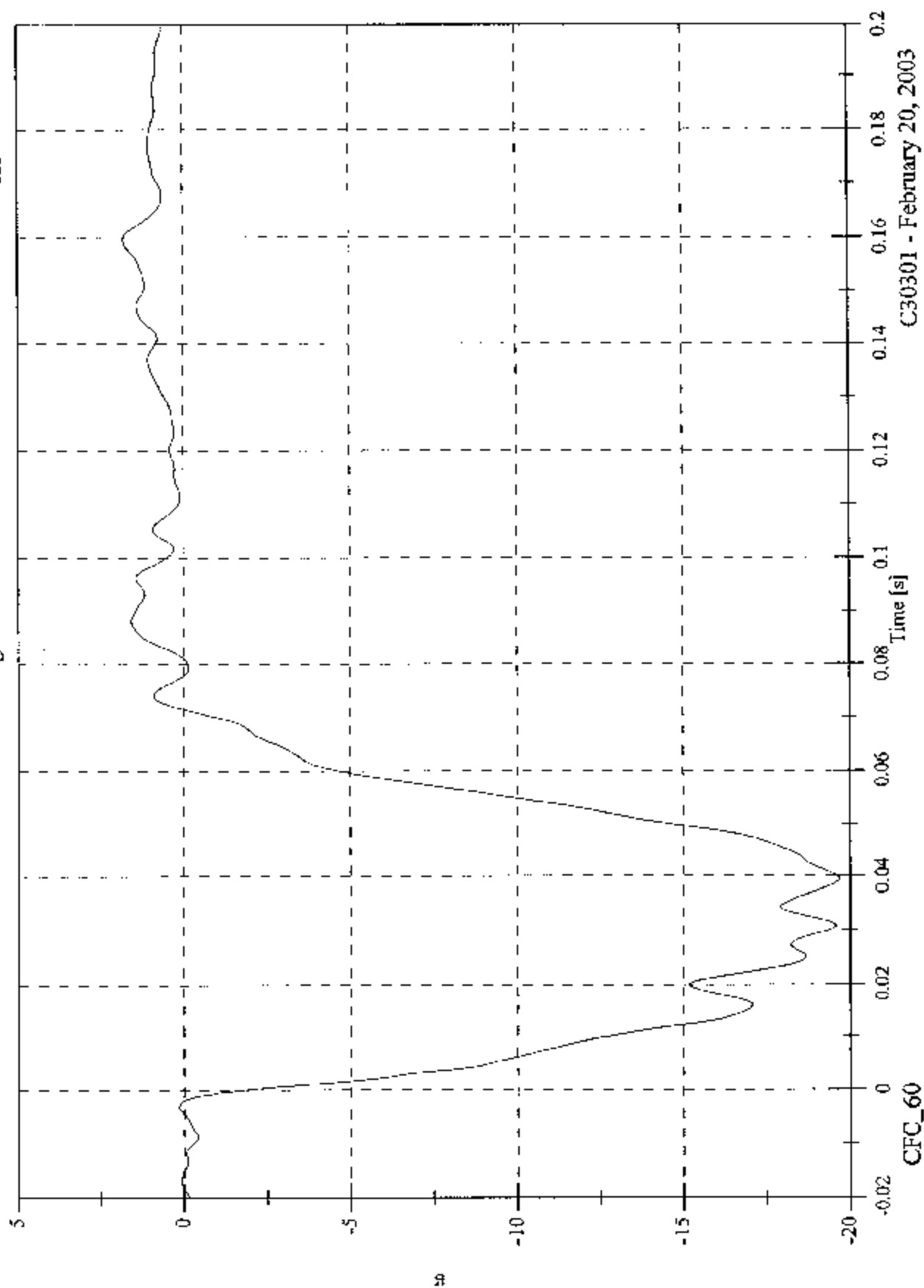


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V1 Moving Barrier Left Rail X

Max: 1.8 [g] at 0.160 [s]
Min: -19.7 [g] at 0.039 [s]

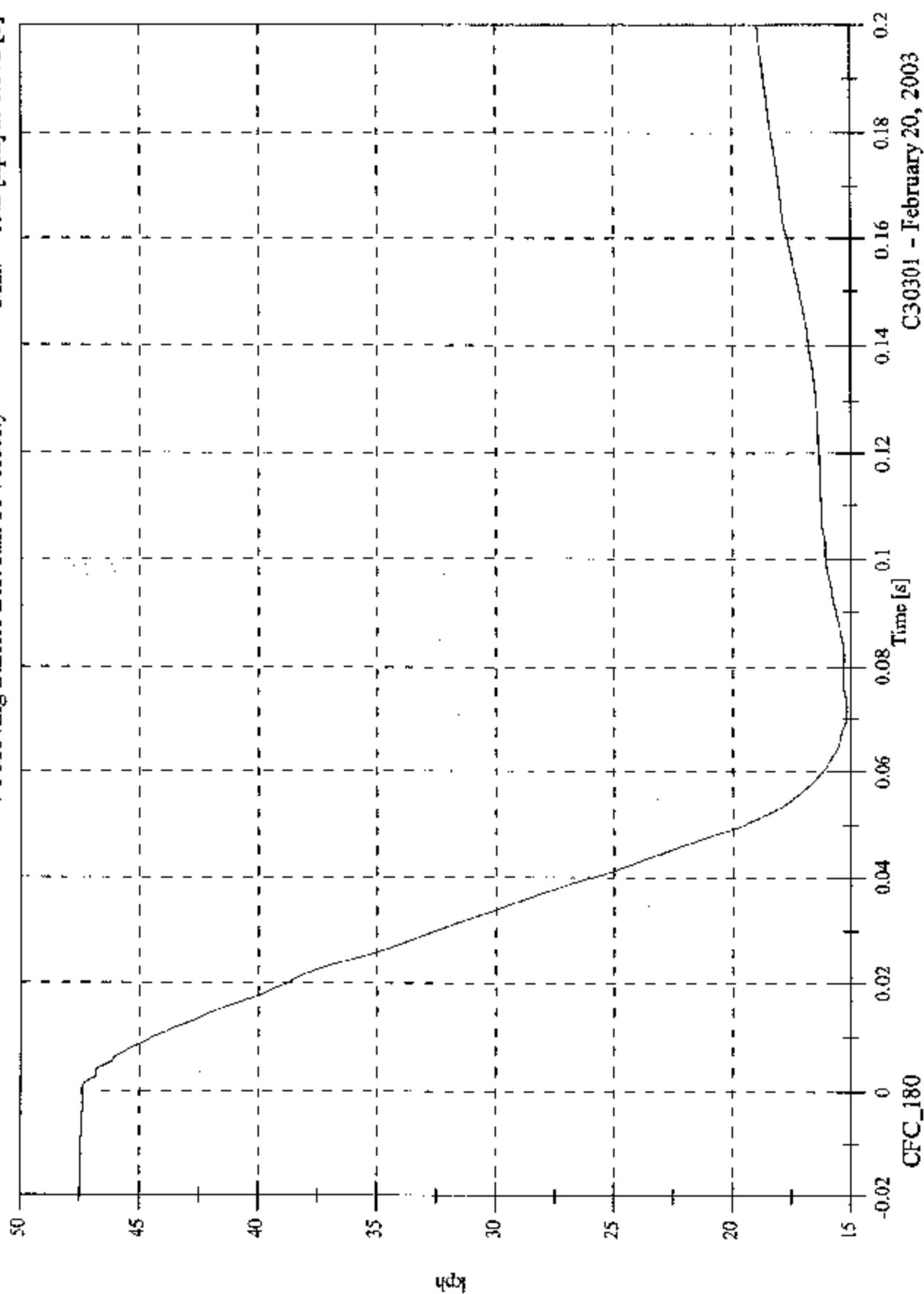


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V1 Moving Barrier Left Rail X Velocity

Max: 47.5 [kph] at -0.015 [s]
Min: 15.2 [kph] at 0.072 [s]

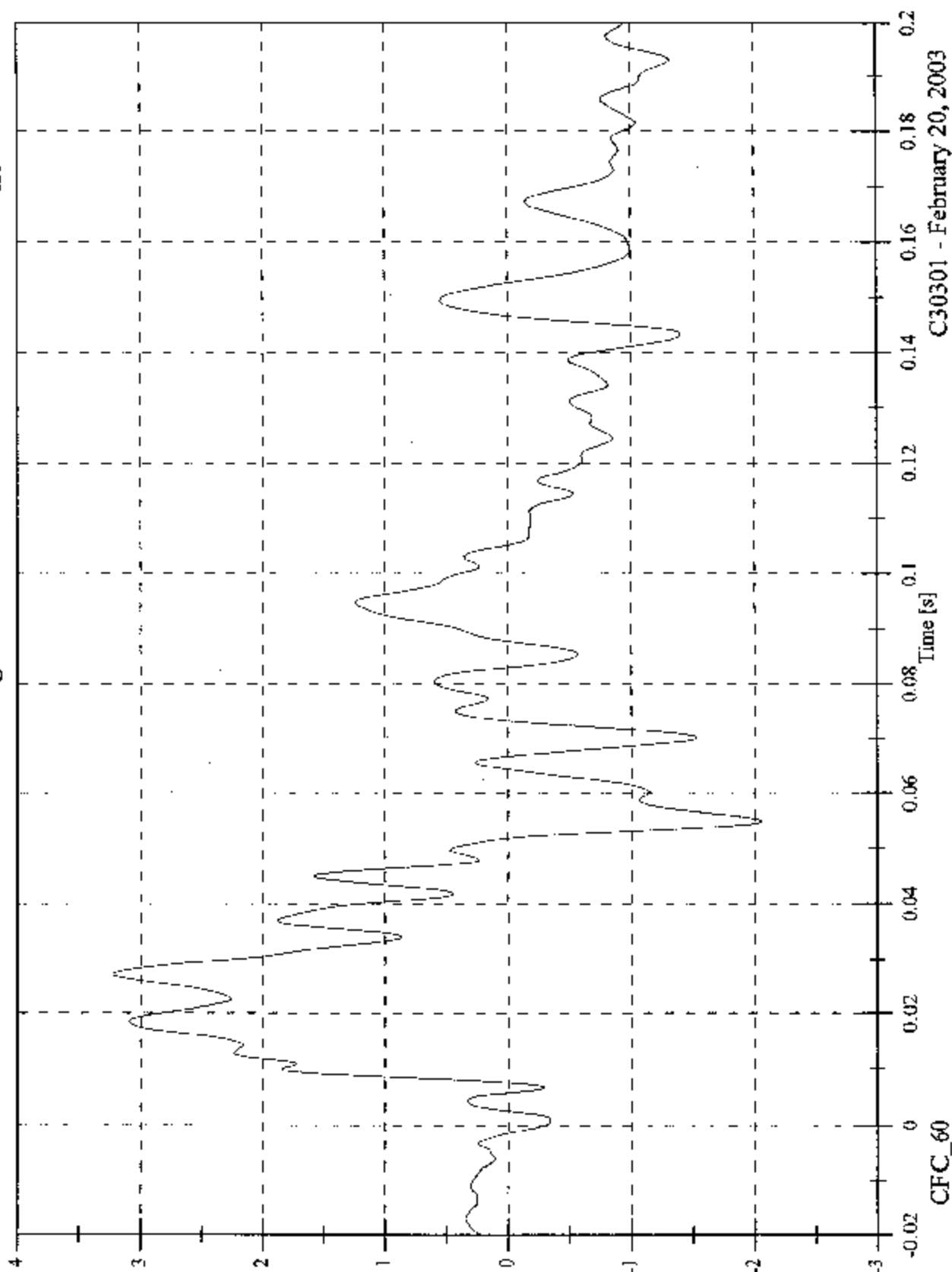


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

VI Moving Barrier Left Rail Y

Max: 3.2 [g] at 0.027 [s]
Min: -2.1 [g] at 0.055 [s]

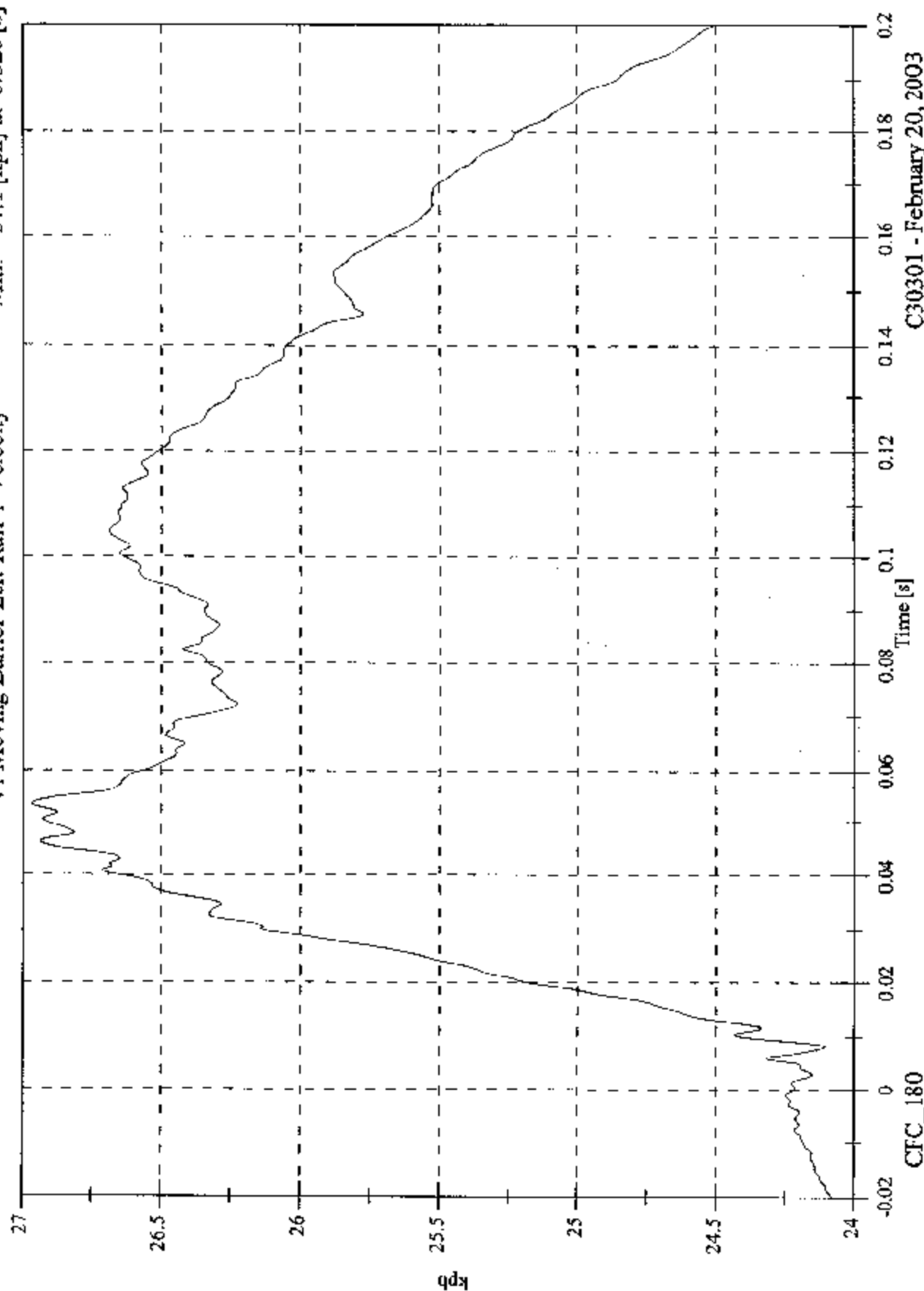


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FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 27.0 [kph] at 0.053 [s]
Min: 24.1 [kph] at -0.020 [s]

V1 Moving Barrier Left Rail Y Velocity

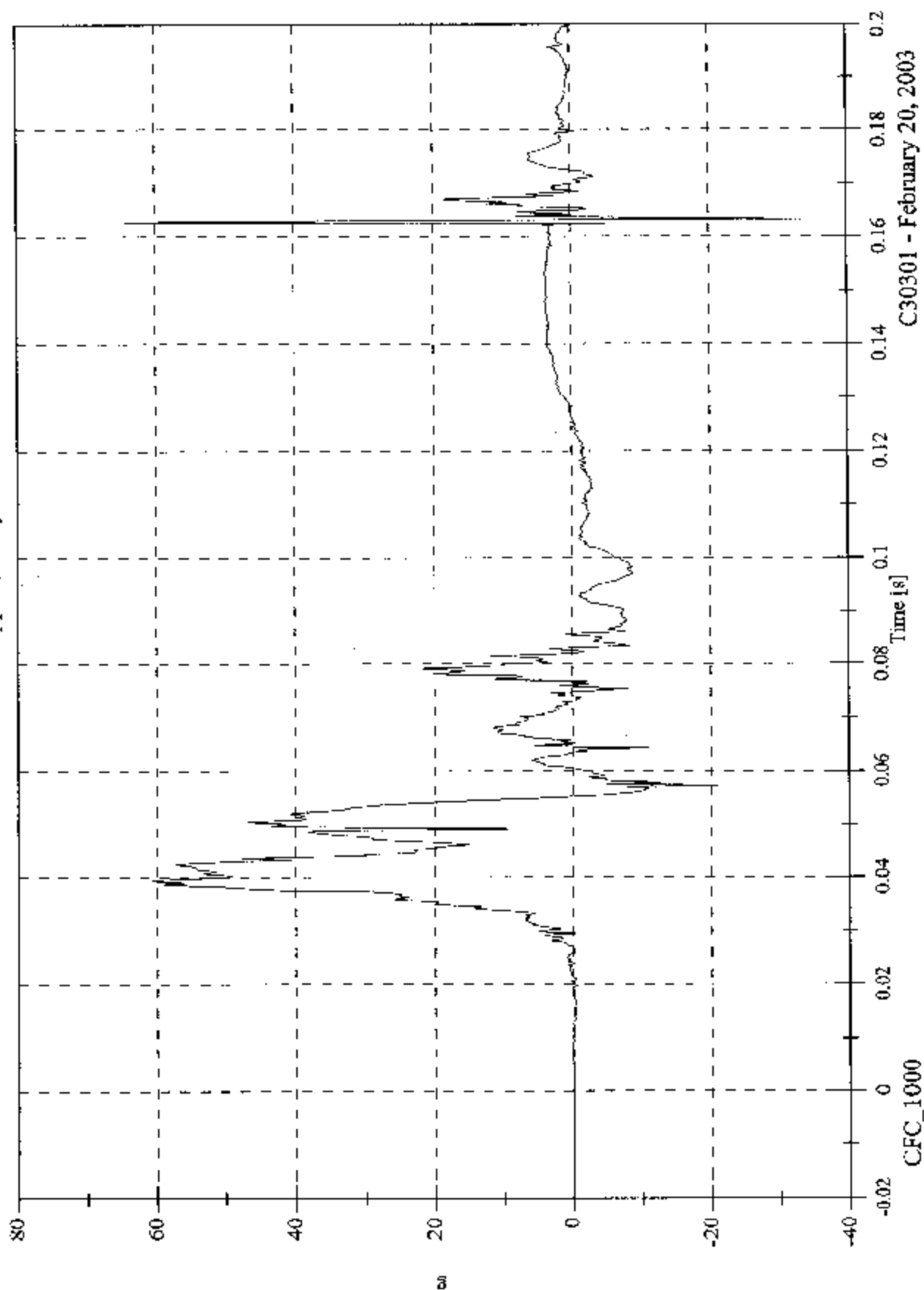


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2P1 Upper Rib Ry

Max: 64.3 [g] at 0.163 [s]
Min: -33.5 [g] at 0.163 [s]

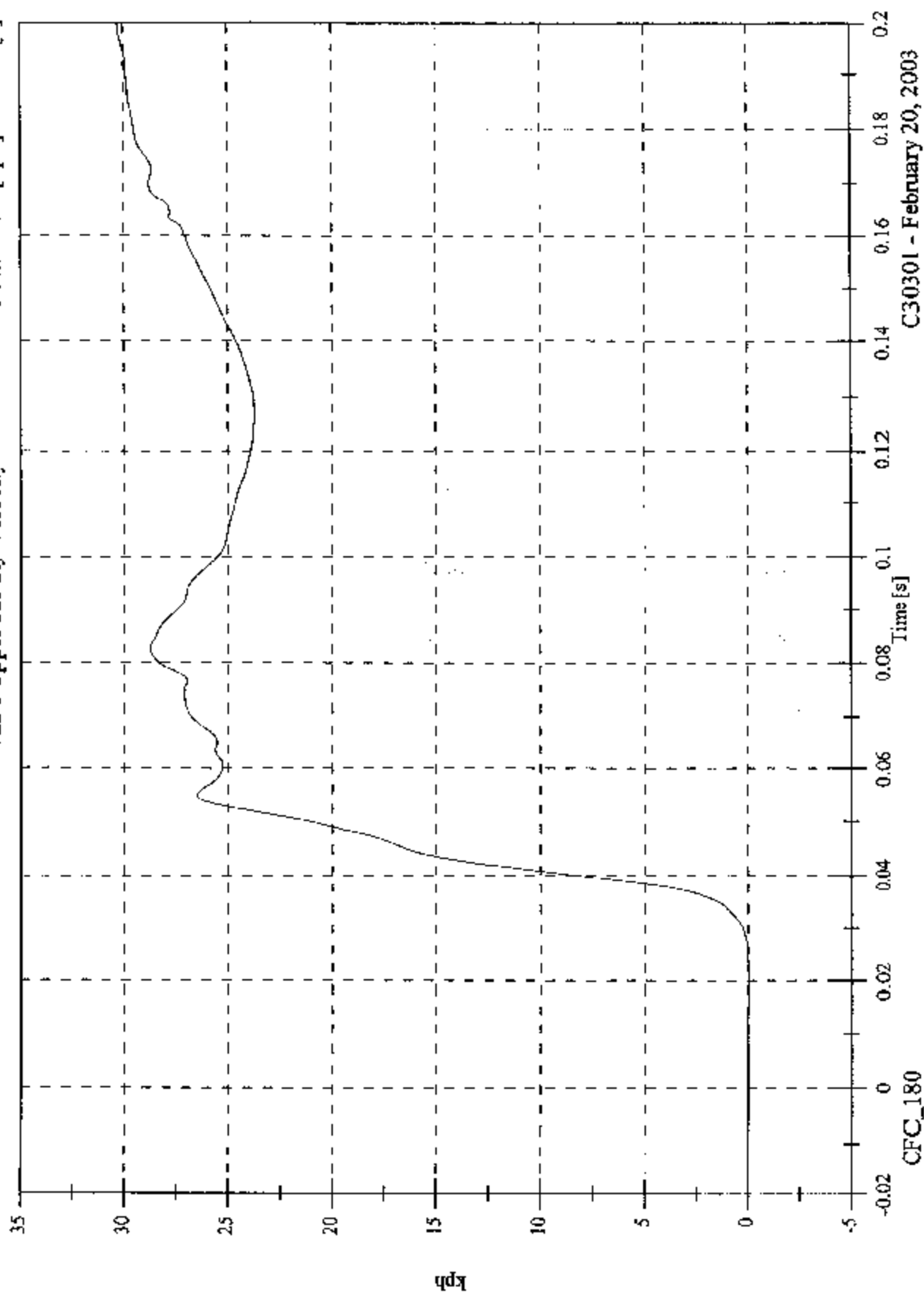


FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 30.3 [kph] at 0.200 [s]

V2P1 Upper Rib Ry Velocity

Min: -0.0 [kph] at 0.021 [s]

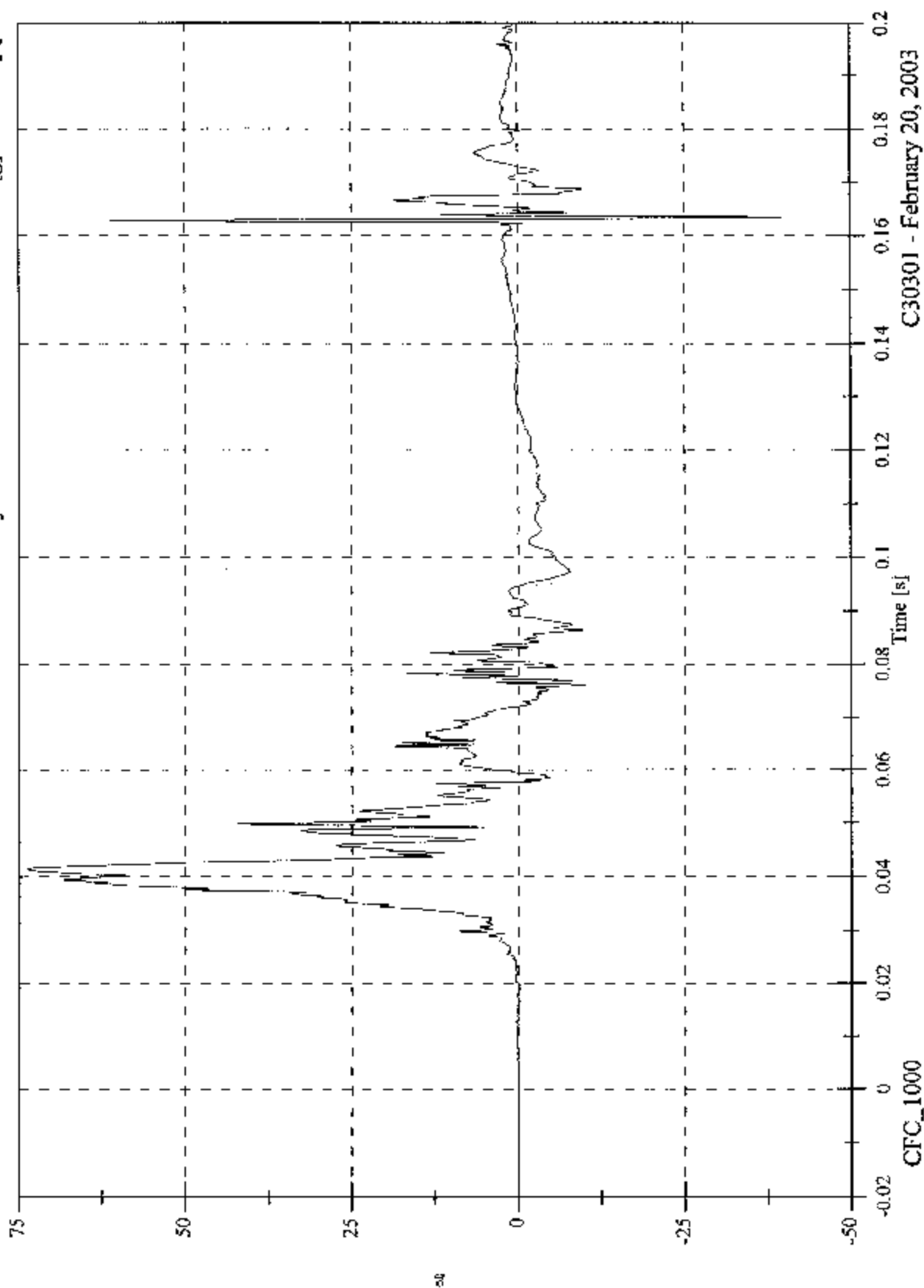


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2P1 Lower Rib Ry

Max: 73.8 [g] at 0.041 [s]
Min: -39.6 [g] at 0.163 [s]



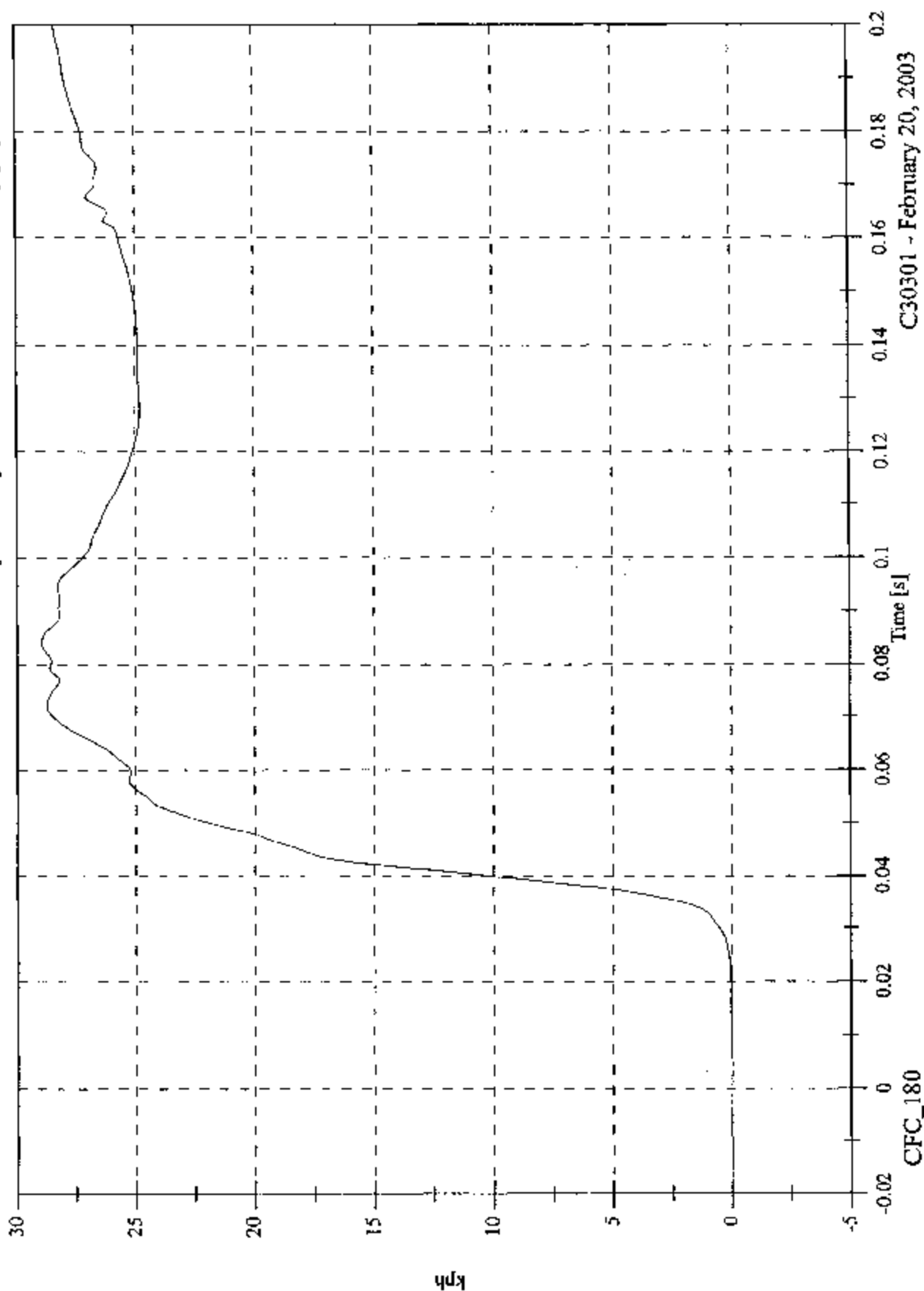
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 29.0 [kph] at 0.084 [s]

V2P1 Lower Rib Ry Velocity

Min: -0.0 [kph] at -0.008 [s]



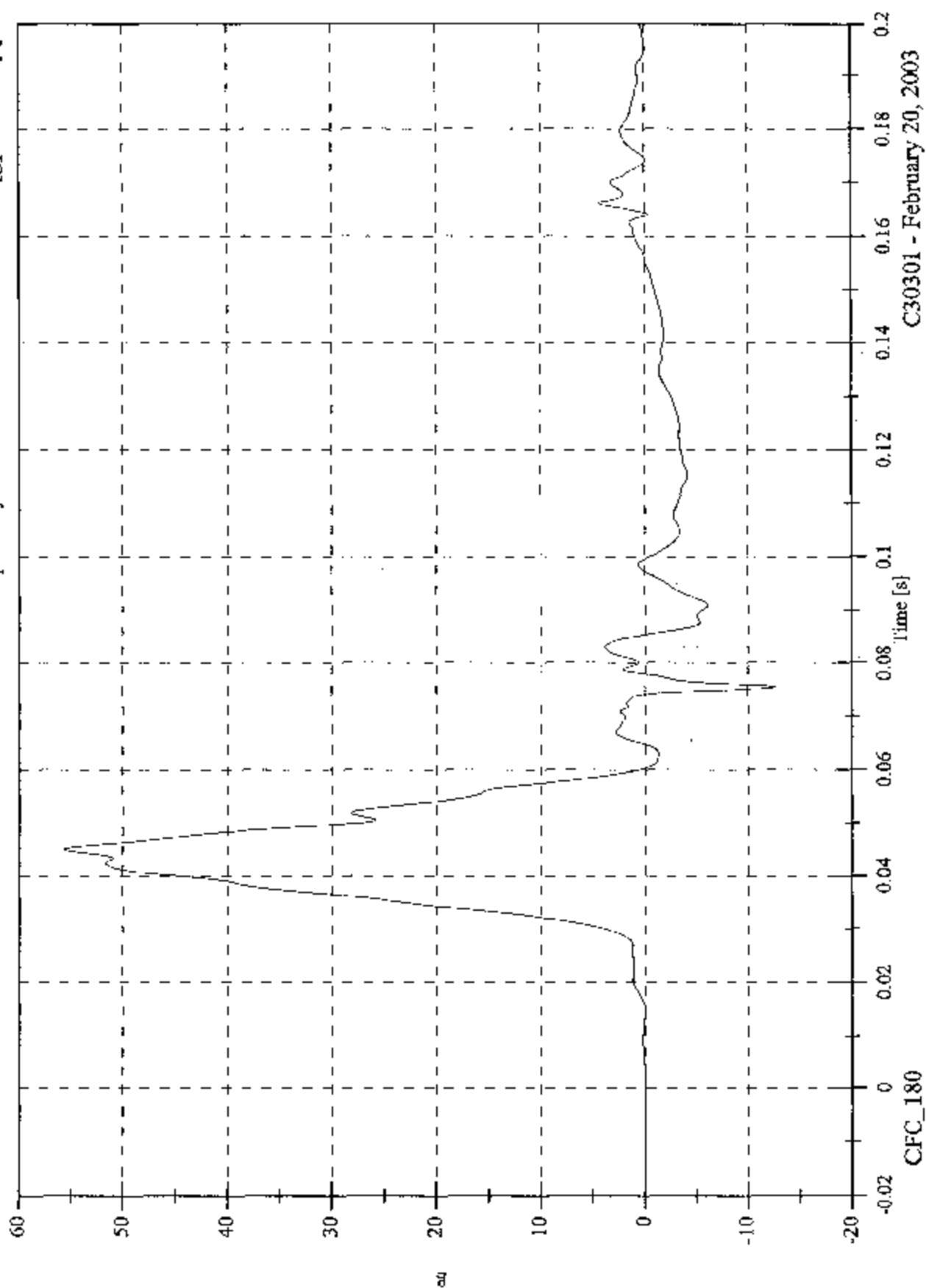
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 55.7 [g] at 0.045 [s]

Min: -12.6 [g] at 0.076 [s]

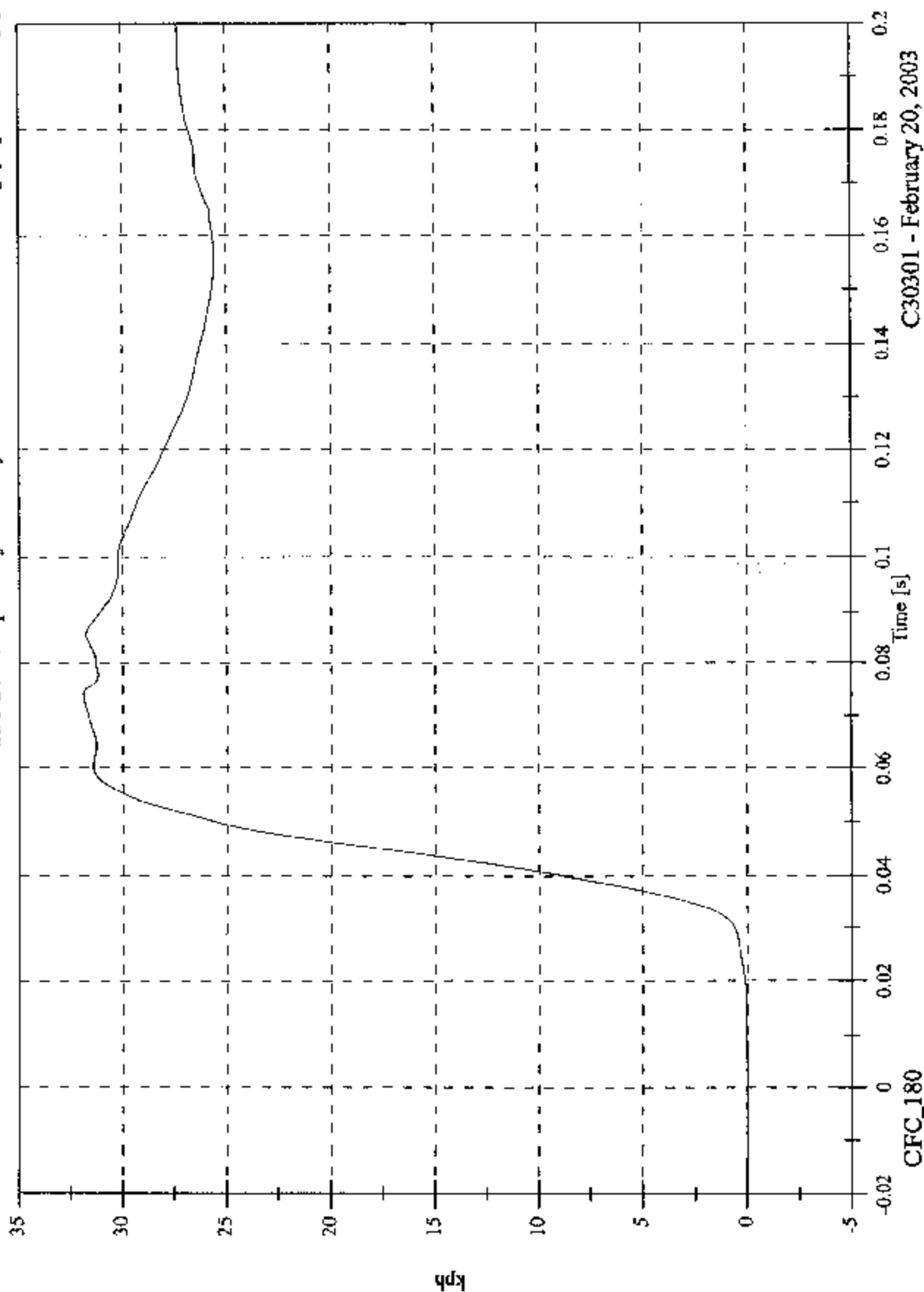
V2P1 Lower Spine Ry



FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 31.9 [kph] at 0.074 [s]
Min: -0.0 [kph] at -0.020 [s]

V2P1 Lower Spine Ry Velocity

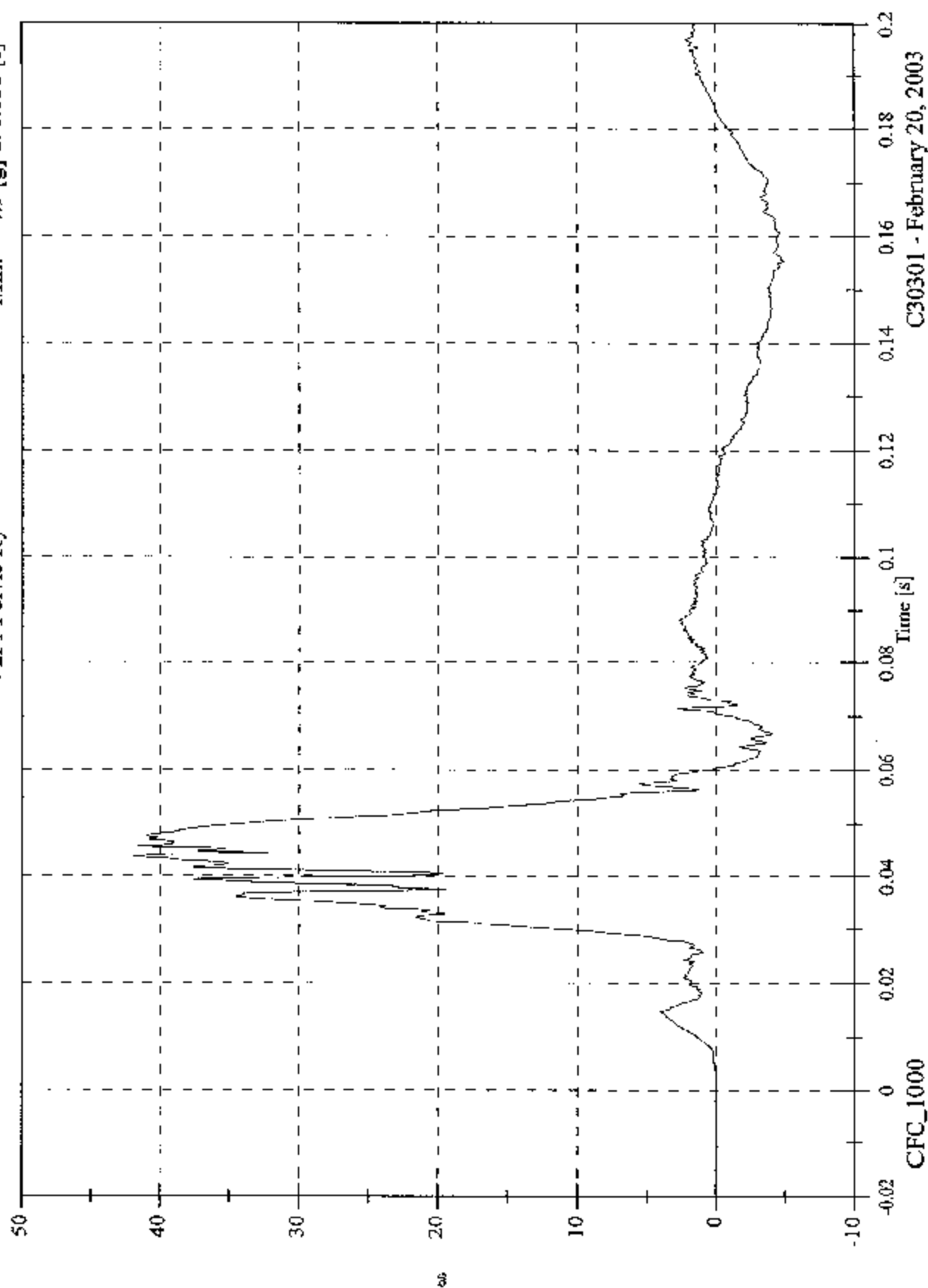


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2P1 Pelvic Ry

Max: 42.0 [g] at 0.043 [s]
Min: -4.9 [g] at 0.155 [s]

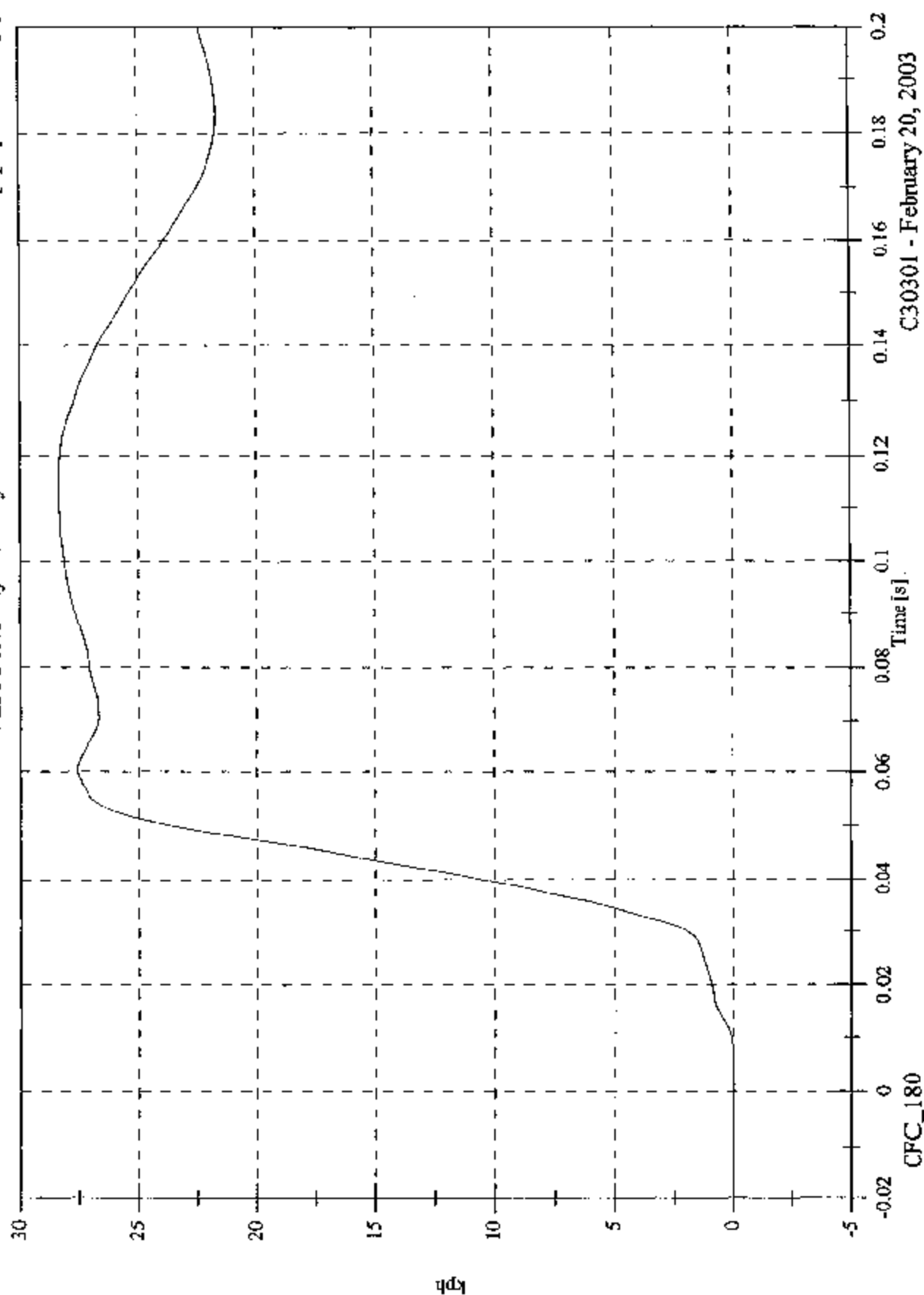


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 28.4 [kph] at 0.112 [s]
Min: -0.0 [kph] at -0.015 [s]

V2PI Pelvic Ry Velocity



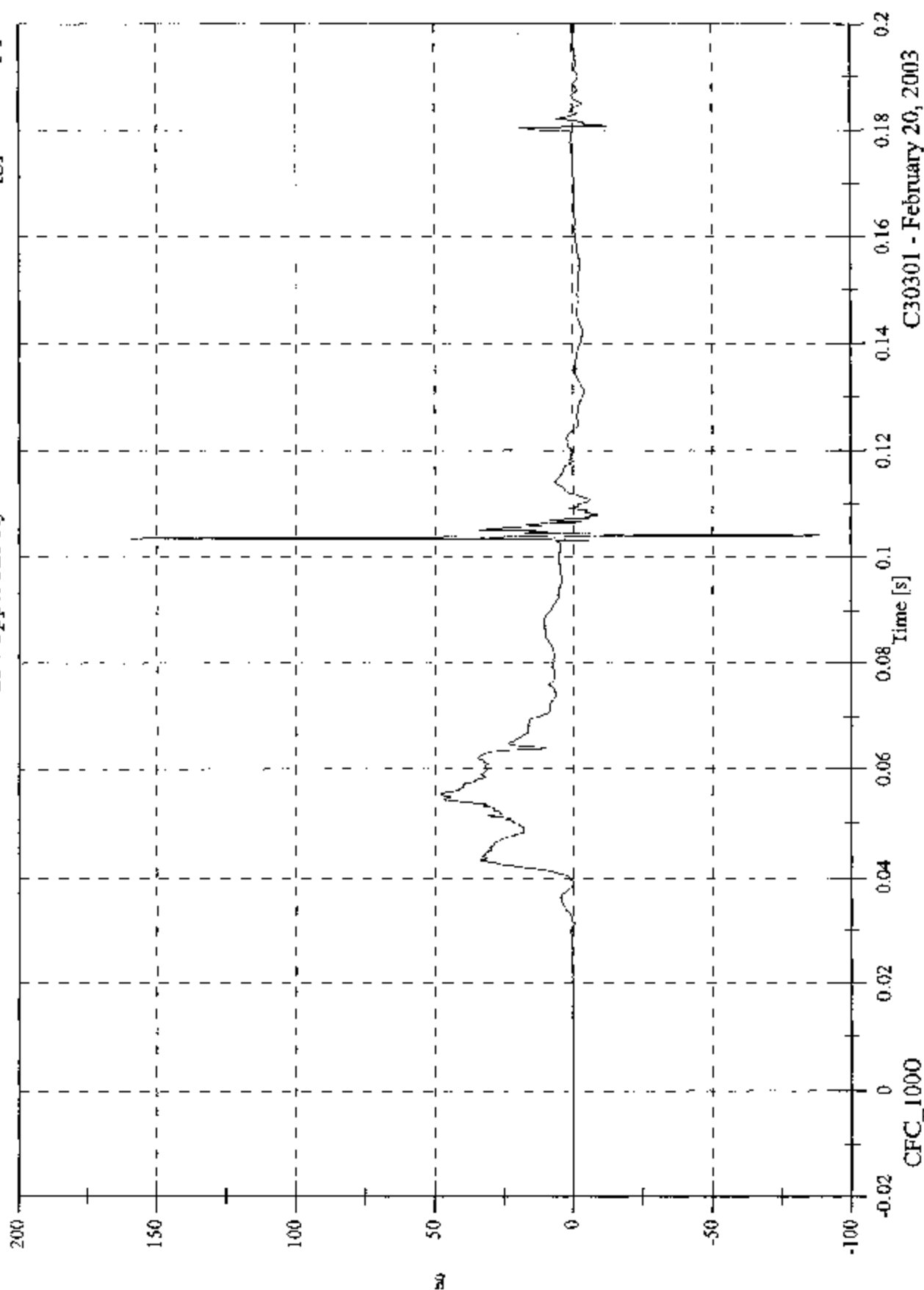
CFC_180

C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2P4 Upper Rib Ry

Max: 165.3 [g] at 0.104 [s]
Min: -88.6 [g] at 0.104 [s]

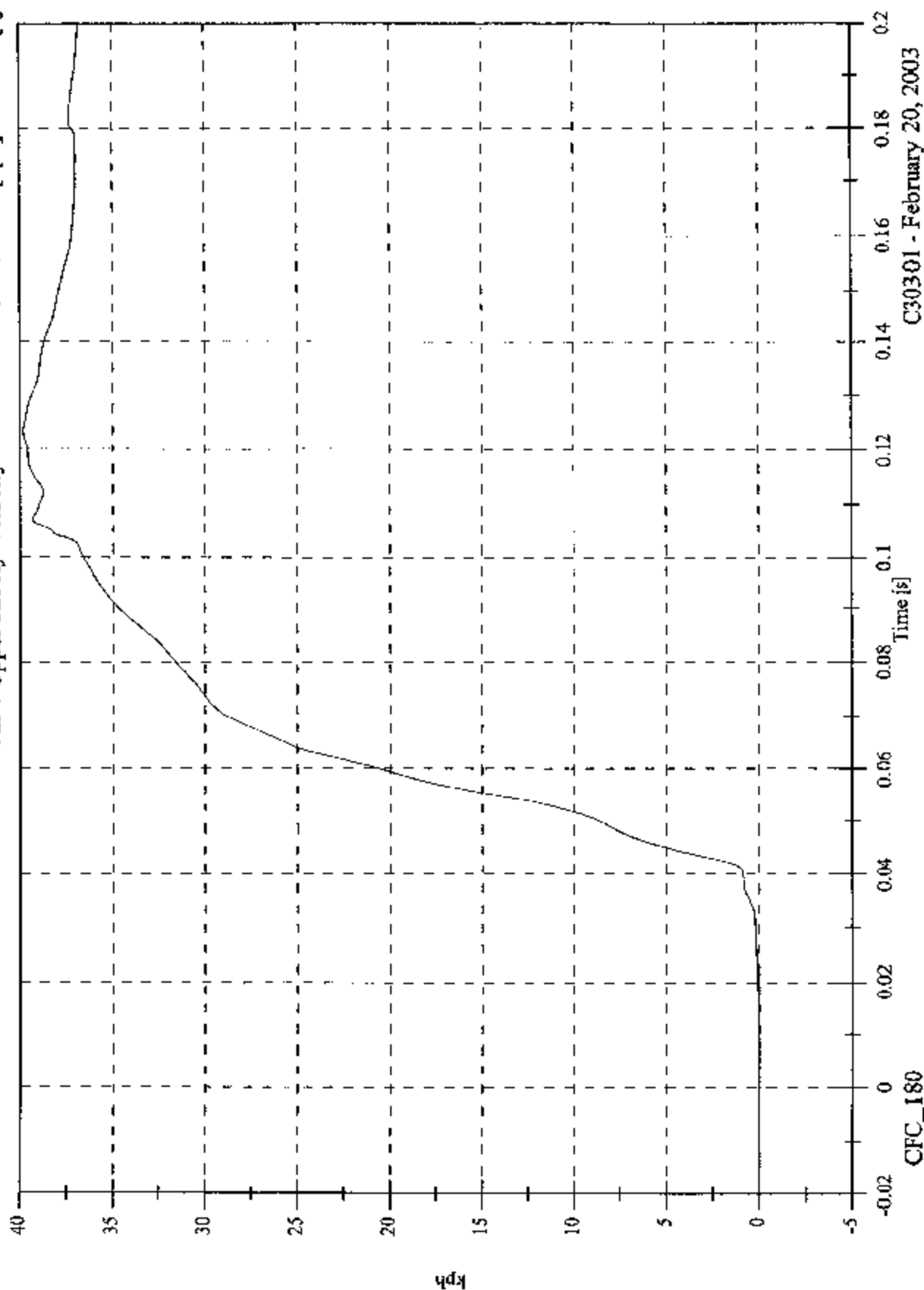


FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 39.8 [kph] at 0.124 [s]

Min: -0.0 [kph] at -0.020 [s]

V2P4 Upper Rib Ry Velocity



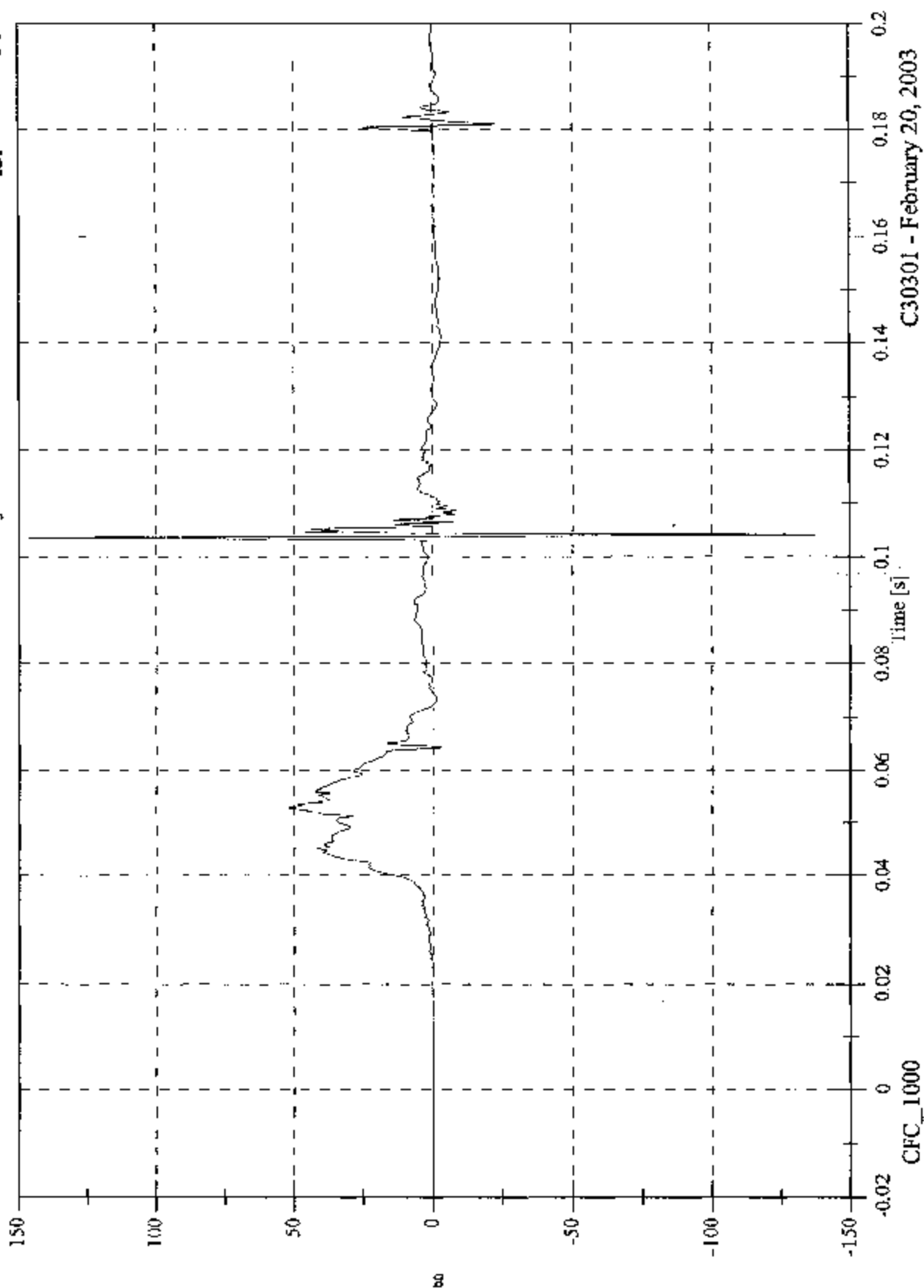
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 146.6 [g] at 0.104 [s]

Min: -137.3 [g] at 0.104 [s]

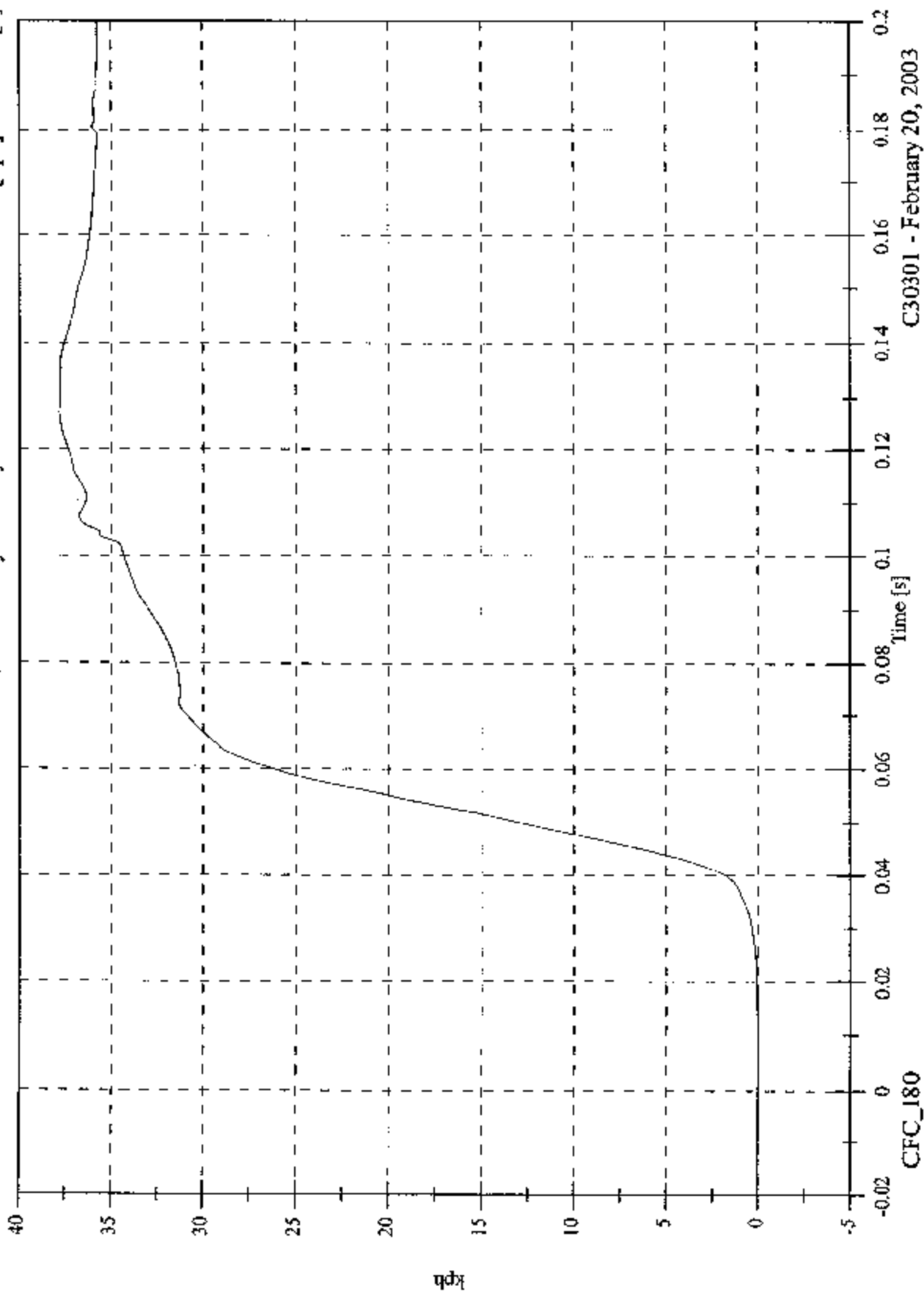
V2P4 Lower Rib Ry



FMVSS214D - 2003 Chrysler PT Cruiser

Max: 37.8 [kph] at 0.127 [s]
Min: -0.0 [kph] at -0.020 [s]

V2P4 Lower Rib Ry Velocity

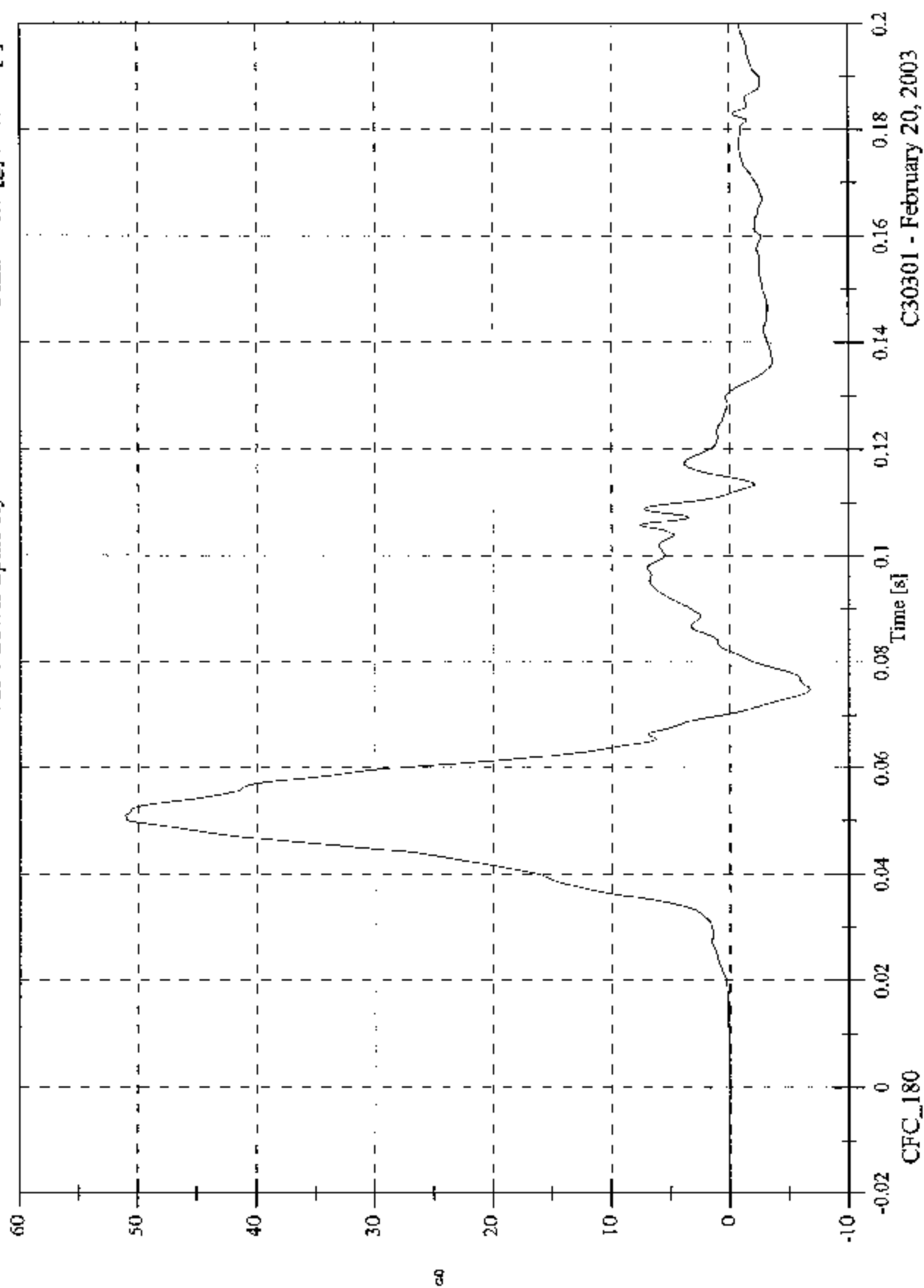


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2P4 Lower Spine Ry

Max: 51.1 [g] at 0.051 [s]
Min: -6.7 [g] at 0.075 [s]

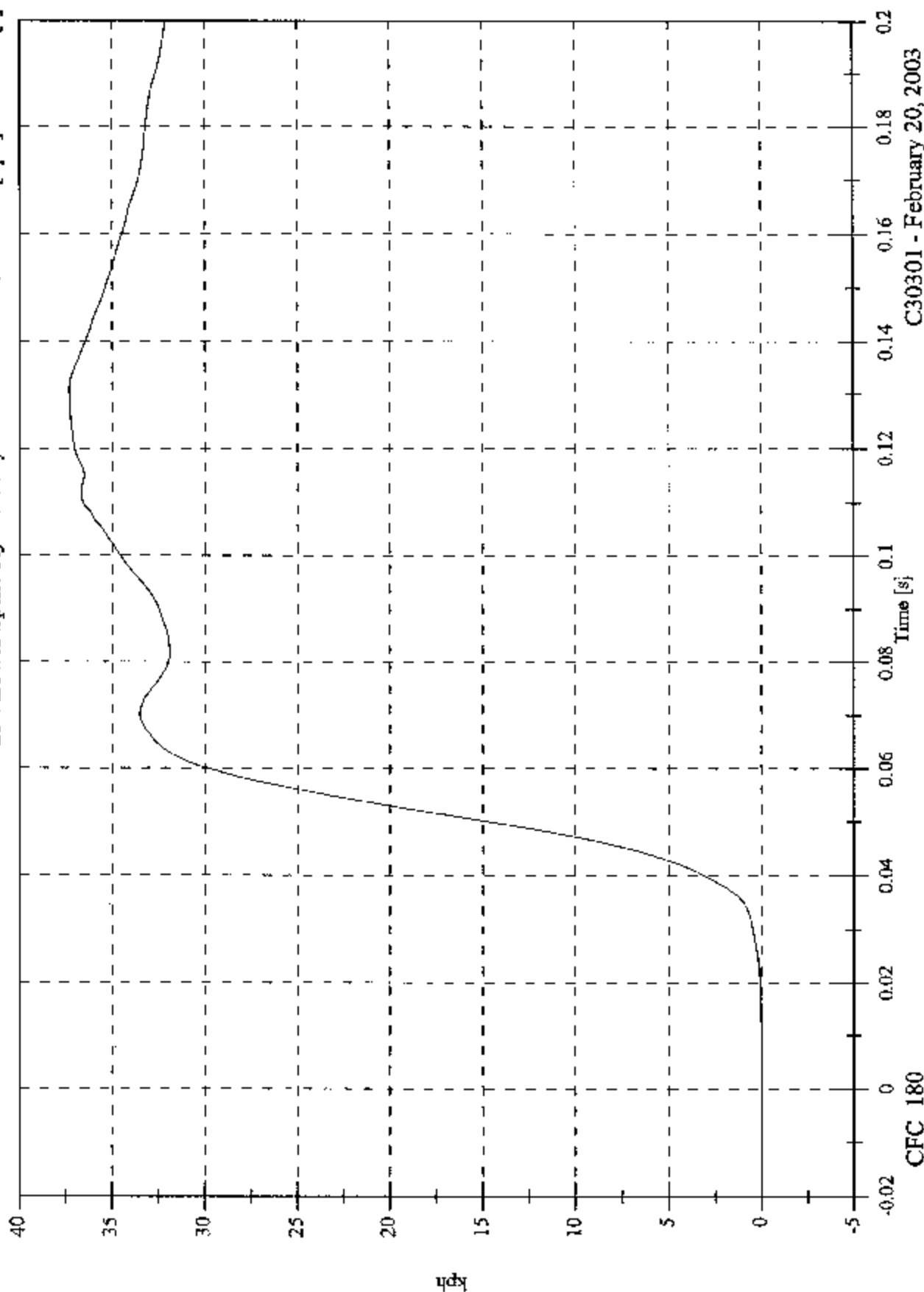


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 37.3 [kph] at 0.131 [s]
Min: -0.0 [kph] at -0.020 [s]

V2P4 Lower Spine Ry Velocity



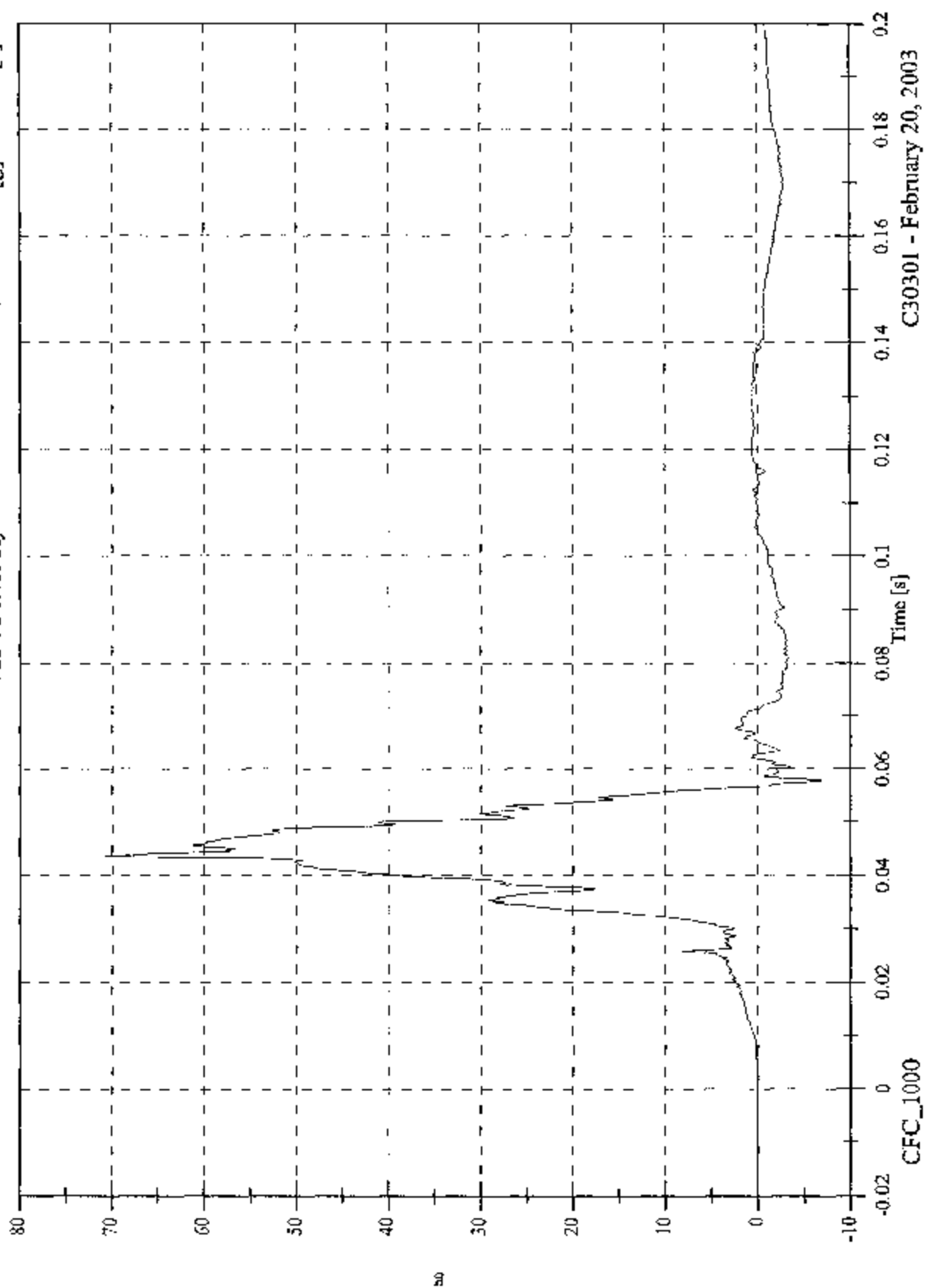
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 70.8 [g] at 0.044 [s]

Min: -6.9 [g] at 0.058 [s]

V2P4 Pelvic Ry



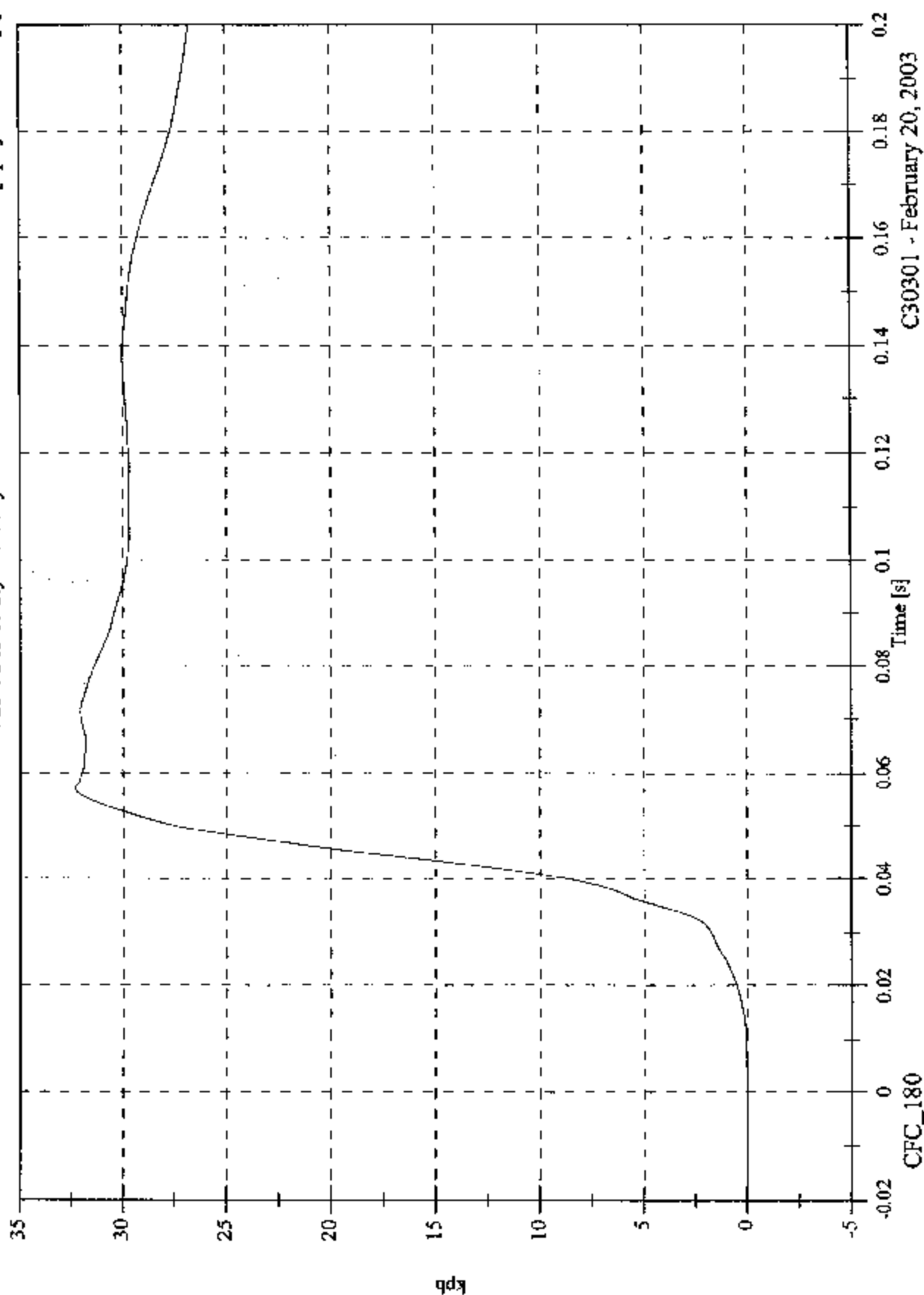
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 32.3 [kph] at 0.057 [s]

Min: -0.0 [kph] at -0.019 [s]

V2P4 Pelvic Ry Velocity



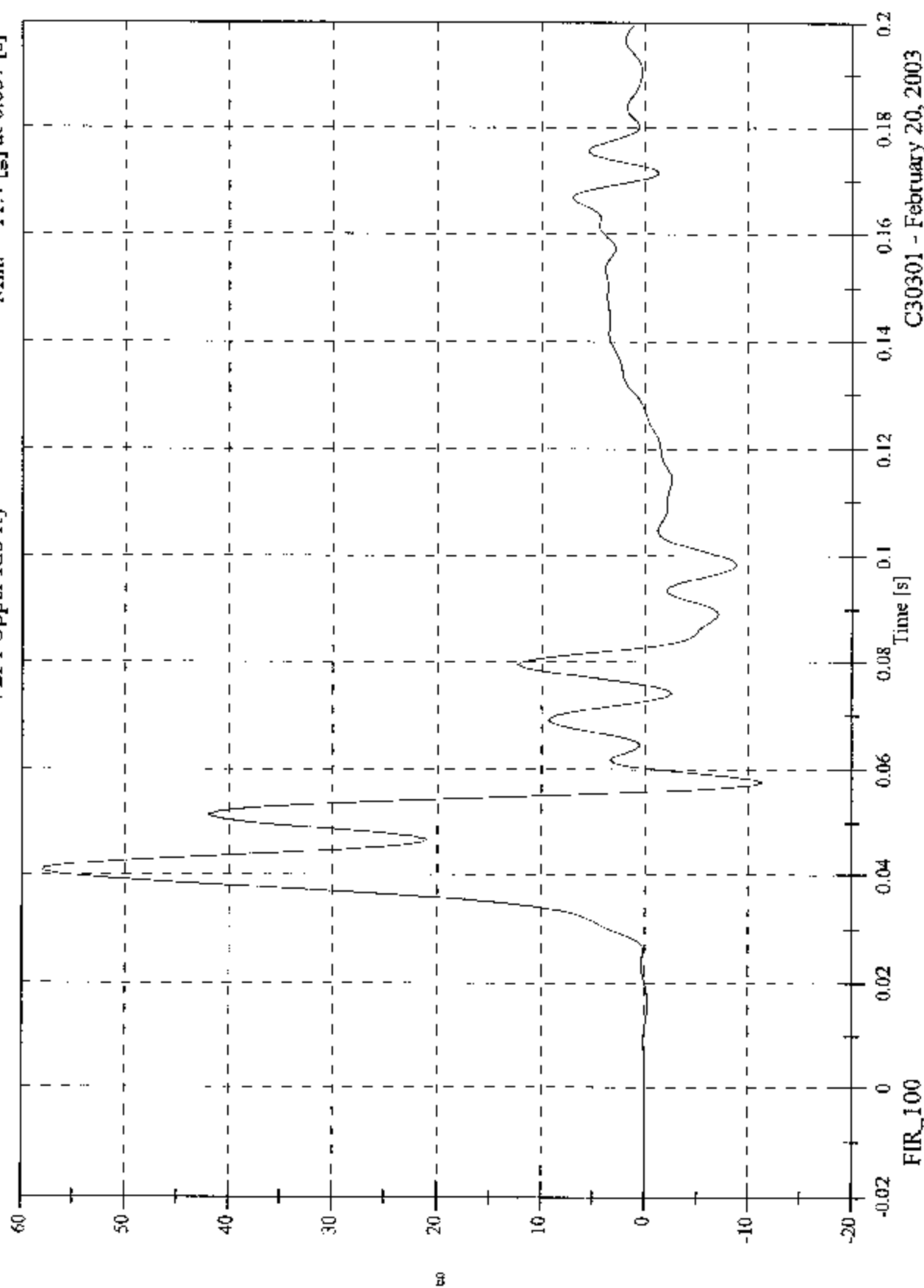
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 58.0 [g] at 0.041 [s]

Min: -11.4 [g] at 0.057 [s]

V2P1 Upper Rib Ry

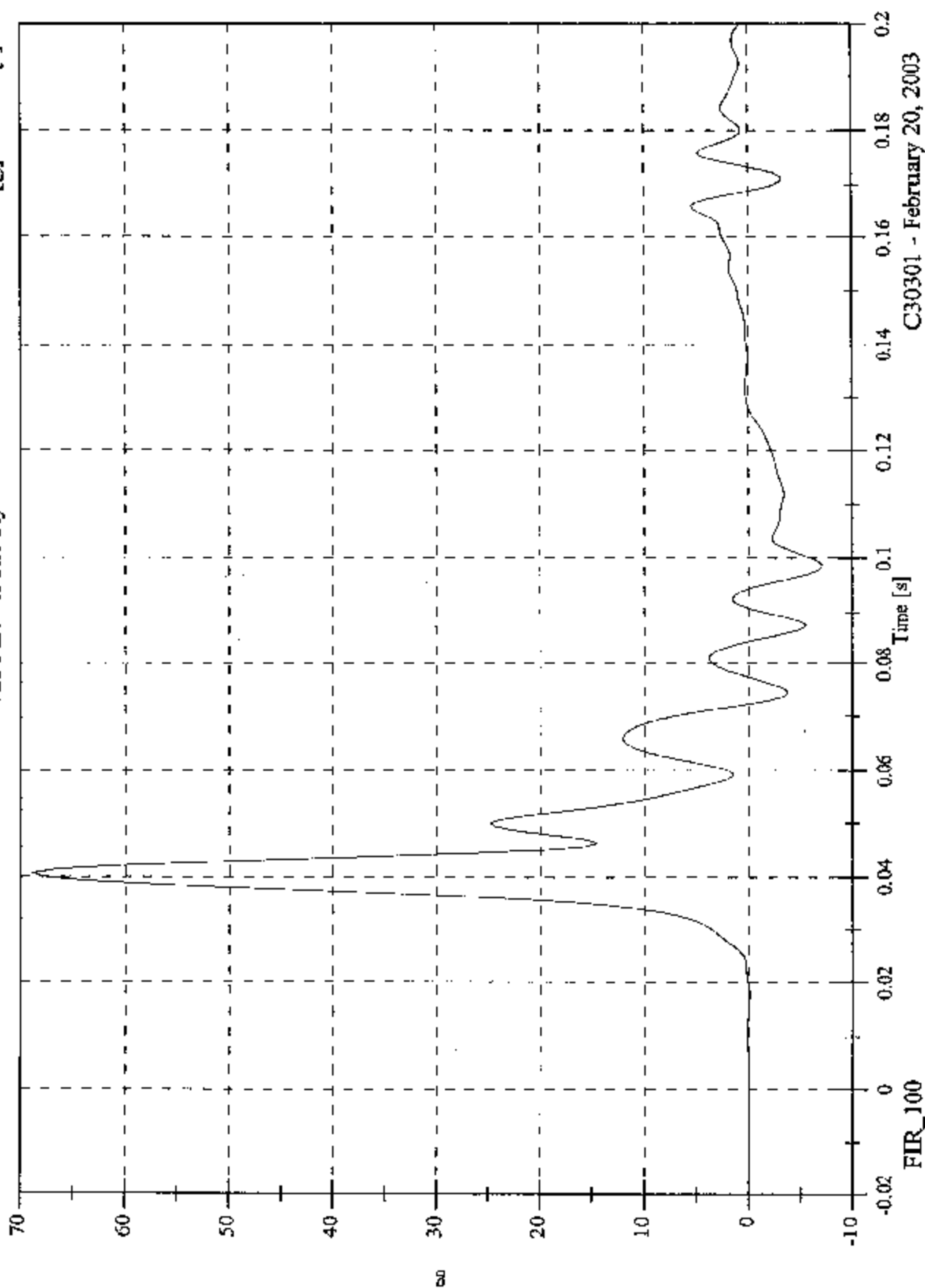


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2P1 Lower Rib Ry

Max: 68.8 [g] at 0.041 [s]
Min: -7.1 [g] at 0.099 [s]



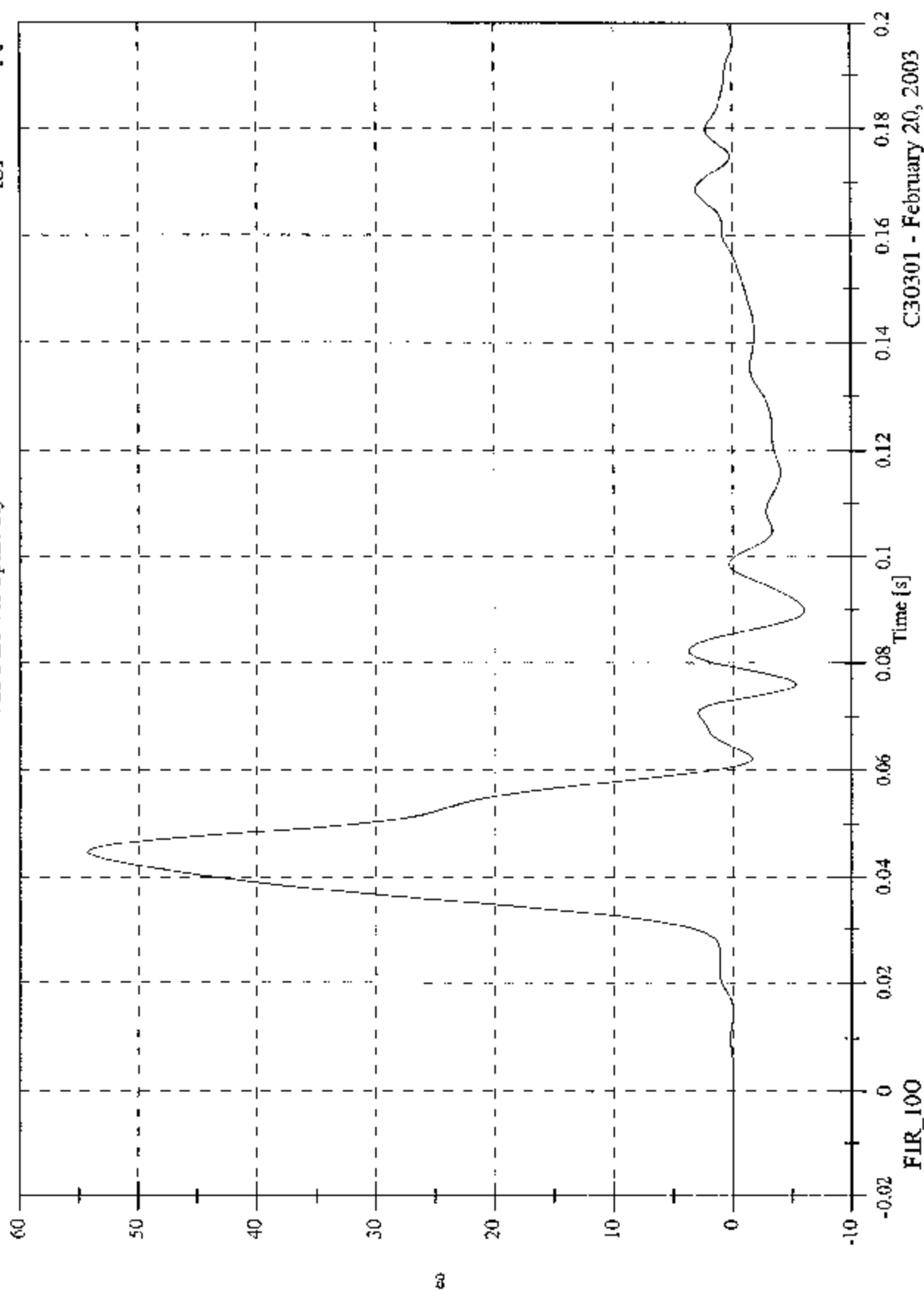
C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2P1 Lower Spine Ry

Max: 54.3 [g] at 0.044 [s]

Min: -6.1 [g] at 0.090 [s]

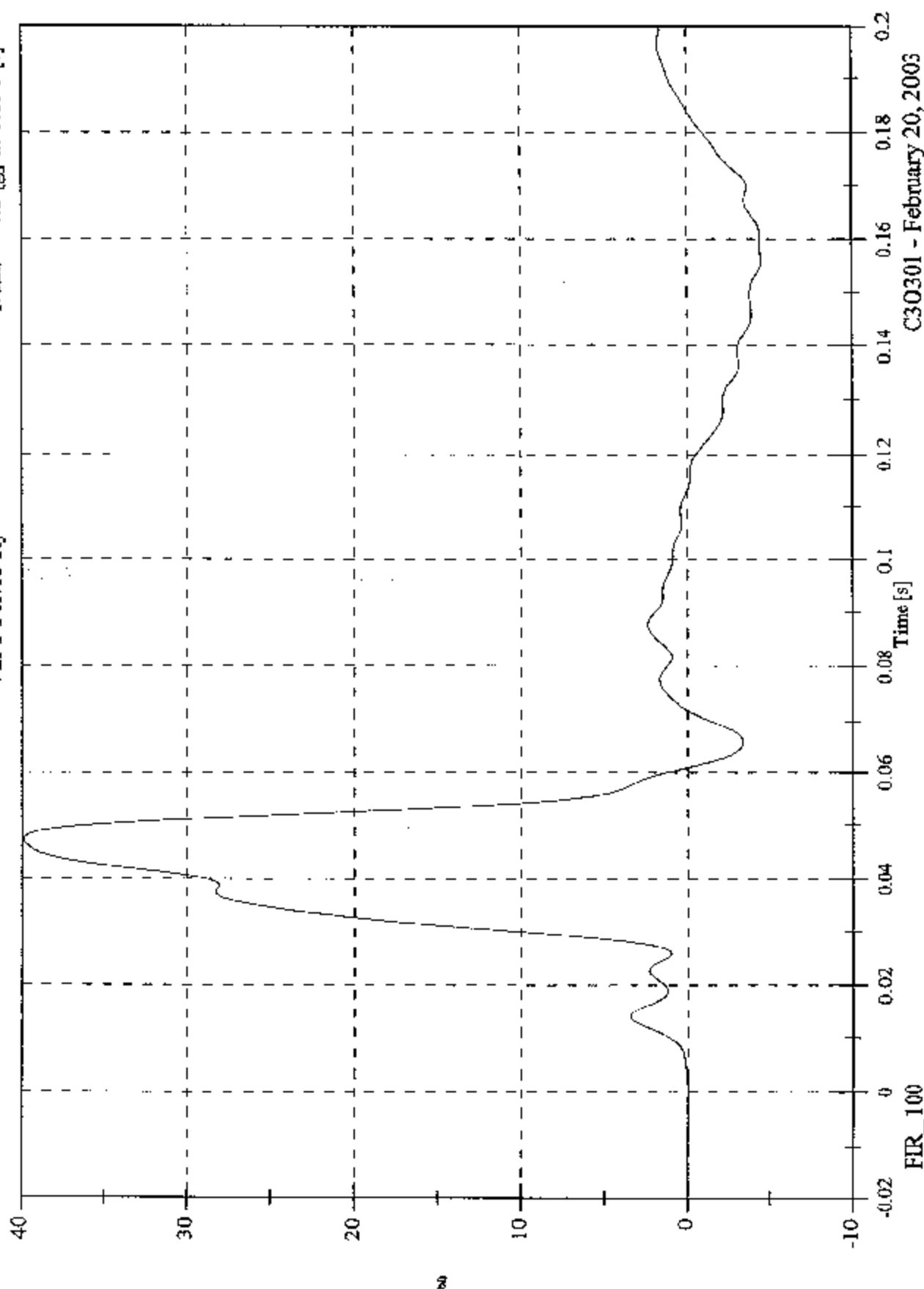


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

Max: 39.9 [g] at 0.047 [s]
Min: -4.5 [g] at 0.156 [s]

V2P1 Pelvic Ry

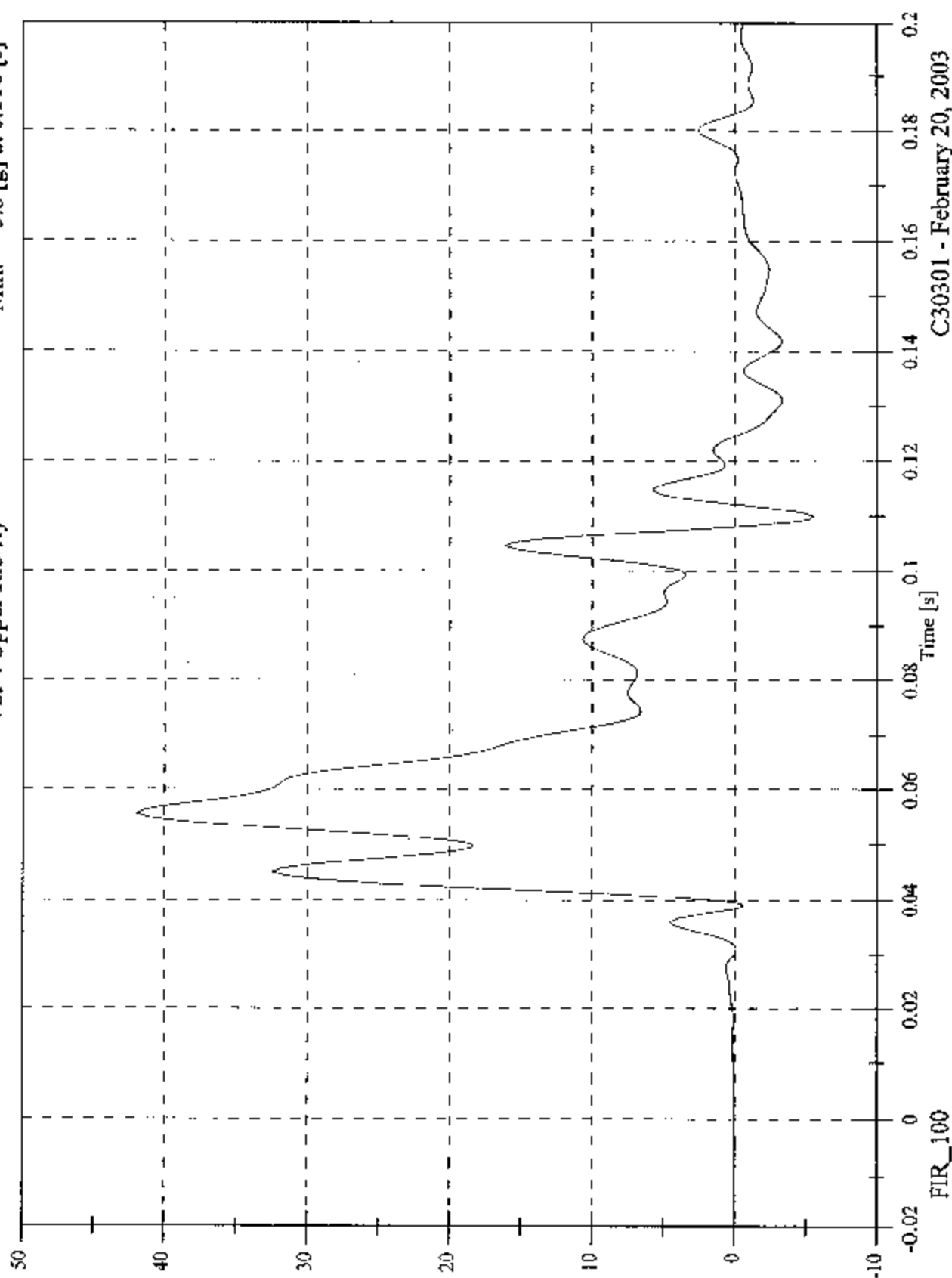


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2P4 Upper Rib Ry

Max: 41.9 [g] at 0.056 [s]
Min: -5.6 [g] at 0.110 [s]

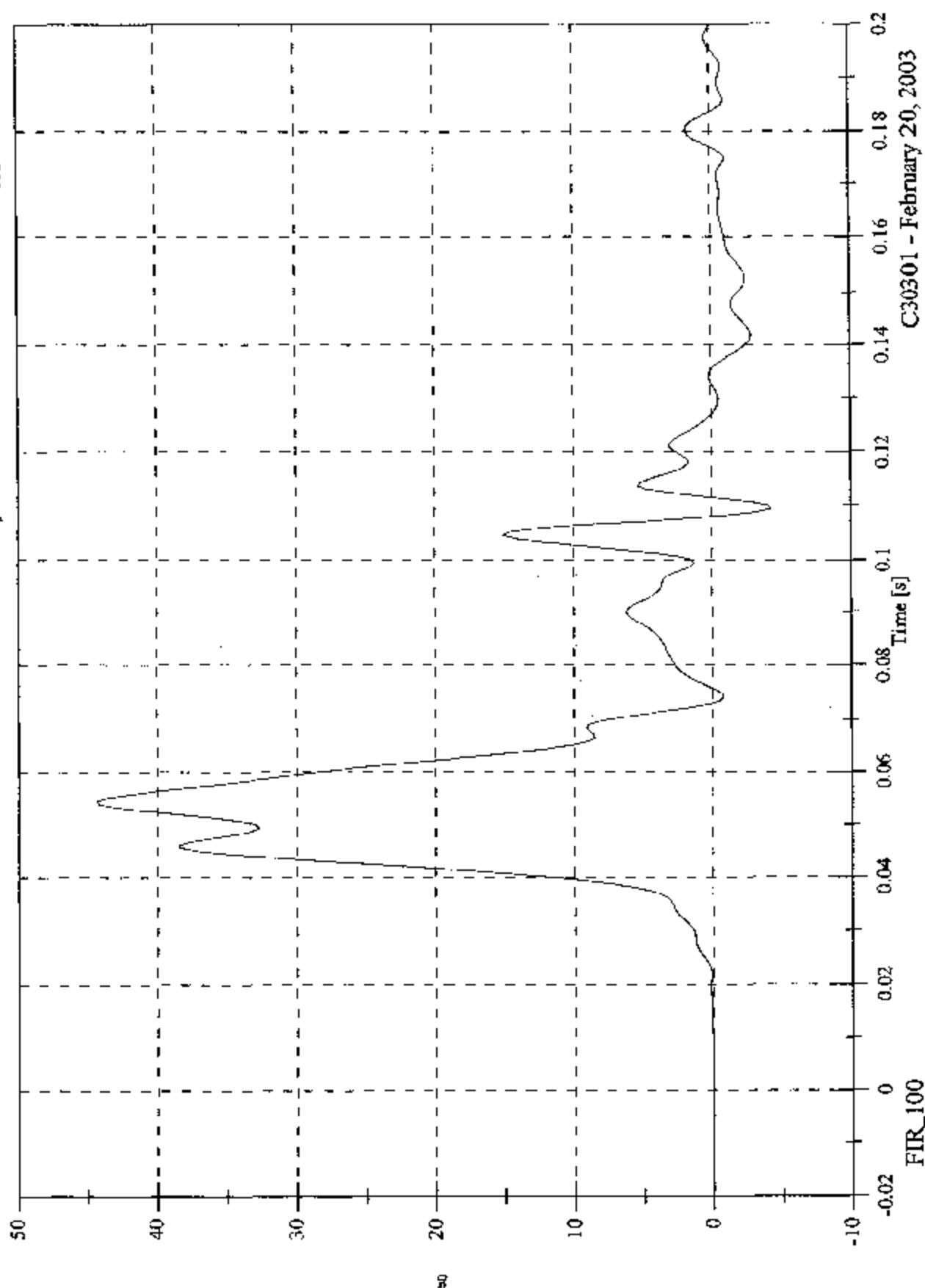


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2P4 Lower Rib Ry

Max: 44.4 [g] at 0.054 [s]
Min: -4.2 [g] at 0.109 [s]

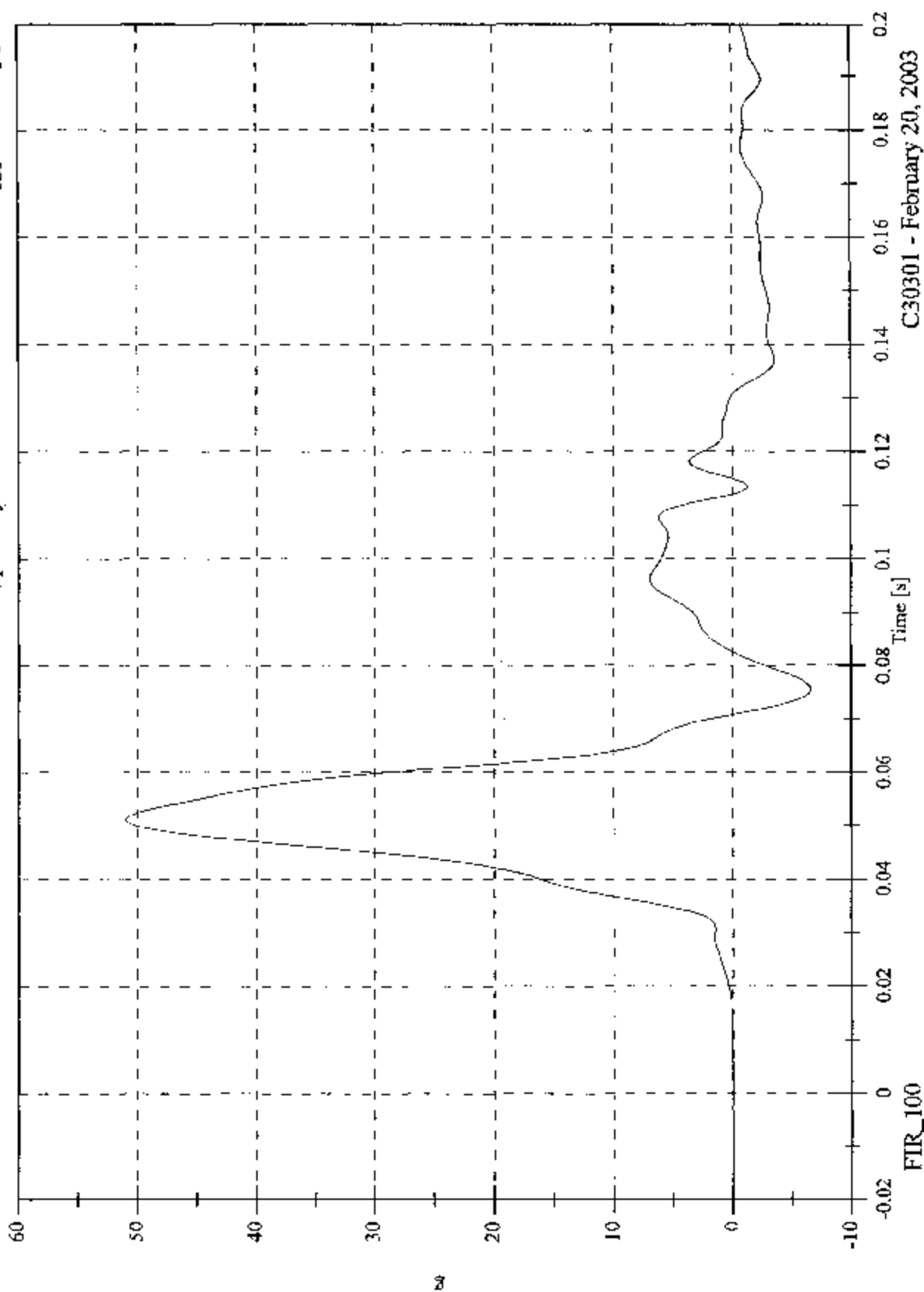


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2P4 Lower Spine Ry

Max: 51.0 [g] at 0.051 [s]
Min: -6.6 [g] at 0.076 [s]

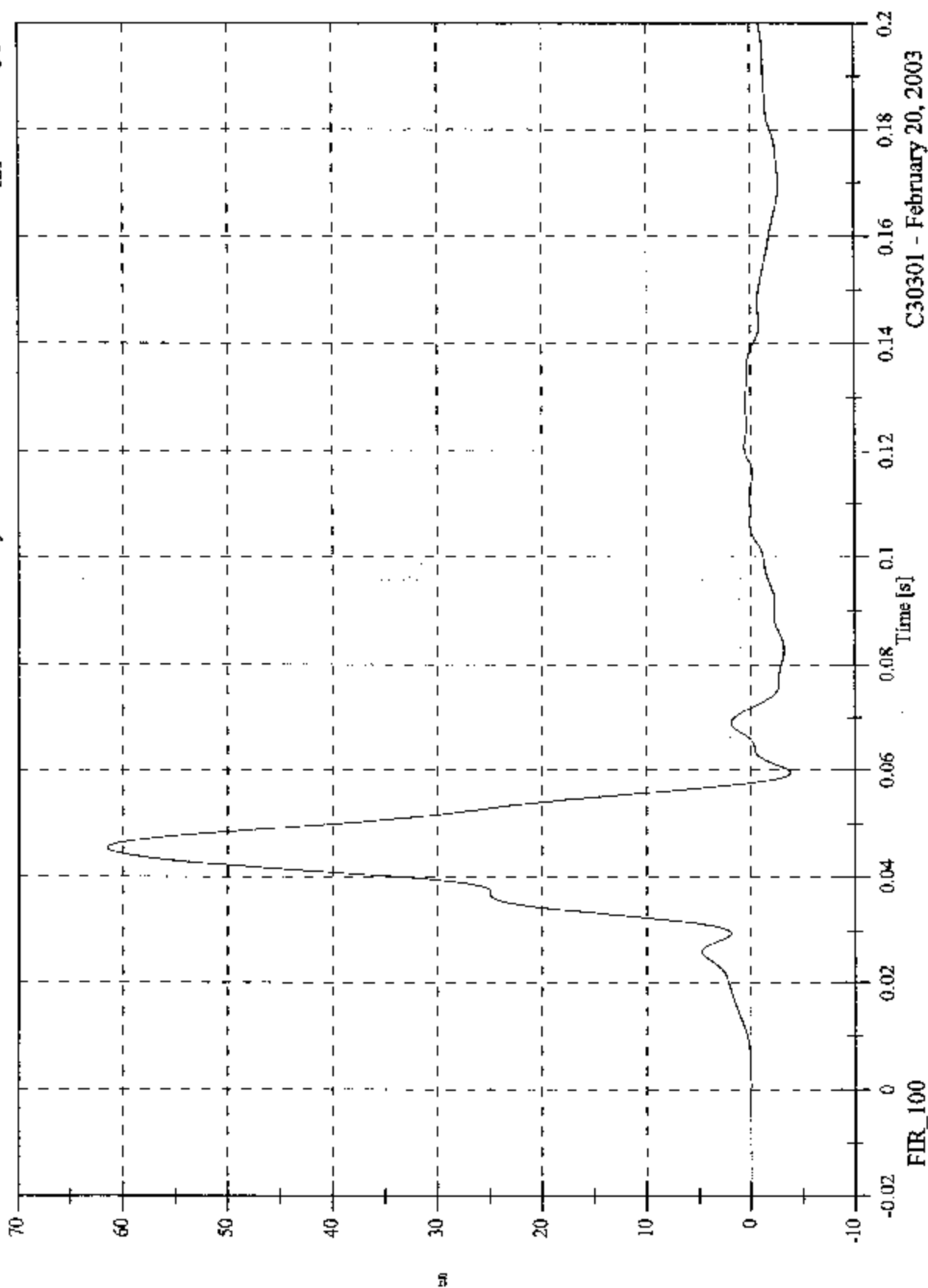


C30301 - February 20, 2003

FMVSS 214D - 2003 Chrysler PT Cruiser

V2P4 Pelvic Ry

Max: 61.4 [g] at 0.045 [s]
Min: -3.8 [g] at 0.059 [s]



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APPENDIX C

SID CONFIGURATION AND PERFORMANCE VERIFICATION DATA

SUMMARY
SID PRE. & POST TEST CALIBRATION
CONFIGURED FOR LEFT SIDE IMPACT

Date: February 28, 2003; February 28, 2003

Sequential Test Number:

1; 1

Laboratory Technician:

B. Swiecicki

TEST PARAMETER	SPECIFICATION	SID NO.: 015		SID NO.: 016	
		PRE TEST	POST TEST	PRE TEST	POST TEST
SH- Seated Height (mm)	889 - 909	902	902	902	902
RH- Rib Height (mm)	501 - 521	508	510	513	513
HP- Hip Pivot Height (mm)	99 ref.	99	99	99	99
RD- Rib from Back Line (mm)	229 - 241	236	236	236	236
KV- Knee Pivot from Back Line (mm)	511 - 526	521	521	521	521
SW- Knee Pivot to Floor (mm)	490 - 505	493	493	495	495
HW- Hip Width (mm)	356 - 391	376	376	368	368
THORAX IMPACTS					
TEMPERATURE (°C)	18.9 - 25.5	20.6	21.1	21.1	21.1
RELATIVE HUMIDITY (%)	10 - 70	40	33	40	33
PROBE SPEED (in/s)	4.27 - 4.33	4.28	4.3	4.32	4.3
UPPER RIB (g's)	37 - 46	37.97	40.32	45.54	43.75
LOWER RIB (g's)	37 - 46	40.3	38.23	41.25	41.17
LOWER SPINE (g's)	15 - 22	19.33	18.94	21.75	21.87
PELVIS IMPACT					
TEMPERATURE (°C)	18.9 - 25.5	20.6	21.1	21.1	21.1
RELATIVE HUMIDITY (%)	10 - 70	40	33	40	33
PROBE SPEED (m/s)	4.27 - 4.33	4.32	4.28	4.28	4.31
PELVIS (g's)	40 - 60	40.43	41.02	40.73	46.16

REMARKS: None

CALIBRATION TEST RESULTS

PRE-TEST

SID NO.: 015

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
Date: February 4, 2003 Laboratory Technician: B. Swiecicki

TEST	COMMENTS
EXTERNAL DIMENSIONS	Passed all requirements.
LATERAL THORAX IMPACT TEST	Passed all requirements.
LATERAL PELVIS IMPACT TEST	Passed all requirements.
HEAD DROP TEST*	Passed all requirements.
LATERAL NECK BEND TEST*	Passed all requirements.
ABDOMINAL COMPRESSION TEST*	Passed all requirements.
LUMBAR FLEXION TEST*	Passed all requirements.

* Test not required for SID certification.

REMARKS: None

**EXTERNAL DIMENSIONS
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
Date: February 4, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	902
RH- Rib Height (mm)	502 - 520	508
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	236
KH- Knee Pivot from Back Line (mm)	511 - 526	521
KV- Knee Pivot to Floor (mm)	490 - 505	493
HW- Hip Width (mm)	356 - 391	376

REMARKS: None

**THORACIC SHOCK ABSORBER TESTS
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
 Date: February 3, 2003 Laboratory Technician: B. Swiecicki

DAMPER IDENTIFICATION: 015

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)		18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)		10 - 70	29
VELOCITY 3.05 m/s	FORCE (N)	836 - 1125	1122.40
	DISPLACEMENT (mm)	30 - 35	30.16
VELOCITY 4.27 m/s	FORCE (N)	1730 - 2099	2063.48
	DISPLACEMENT (mm)	32 - 37	35.62
VELOCITY 6.10 m/s	FORCE (N)	3741 - 4448	4399.67
	DISPLACEMENT (mm)	33 - 40	38.49

DAMPER SETTING: 5

REMARKS: None

015 Shock Low at 3.05 m/s

Low Part 572F Shock Absorber Impact

Calibration Date: 02-03-03

Serial No: 015

Work File: 015SL 2-03-03

TEST RESULTS

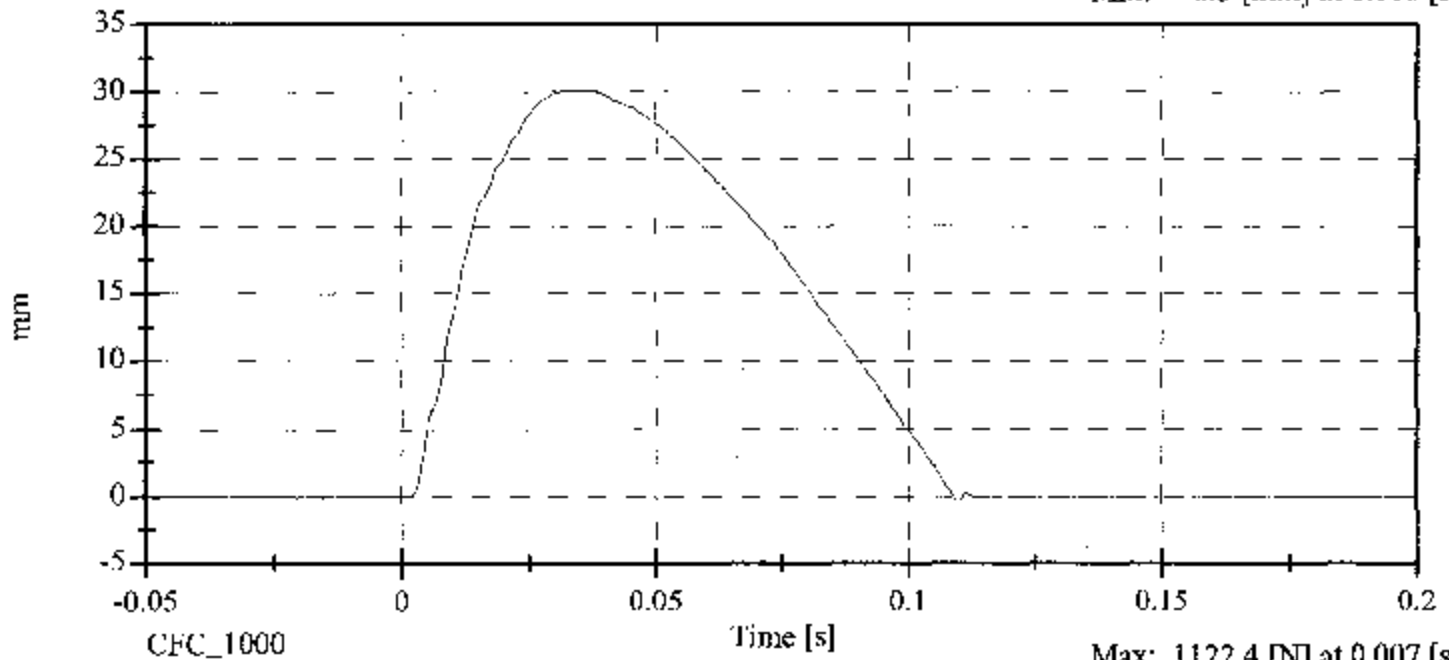
TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	29.00 %	Passed
Displacement:	30.00-35.00 mm	30.16 mm	Passed
Maximum Force:	836.00-1125.00 N	1122.40 N	Passed

015 Shock Low

Displacement vs. Time

Max: 30.2 [mm] at 0.035 [s]

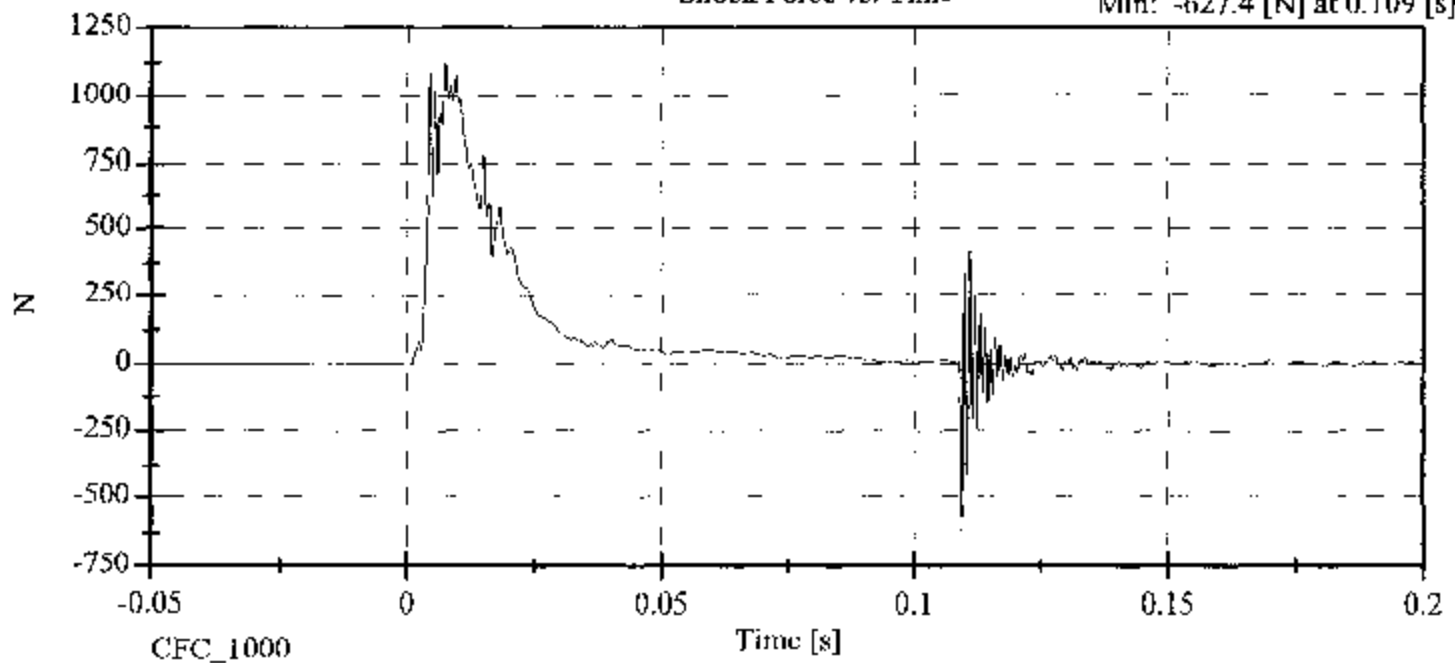
Min: -0.3 [mm] at 0.110 [s]



Shock Force vs. Time

Max: 1122.4 [N] at 0.007 [s]

Min: -627.4 [N] at 0.109 [s]



015 Shock Medium at 4.27 m/s

Medium Part 572F Shock Absorber Impact

Calibration Date: 02-03-03

Serial No: 015

Work File: 015SM1 2-03-03

TEST RESULTS

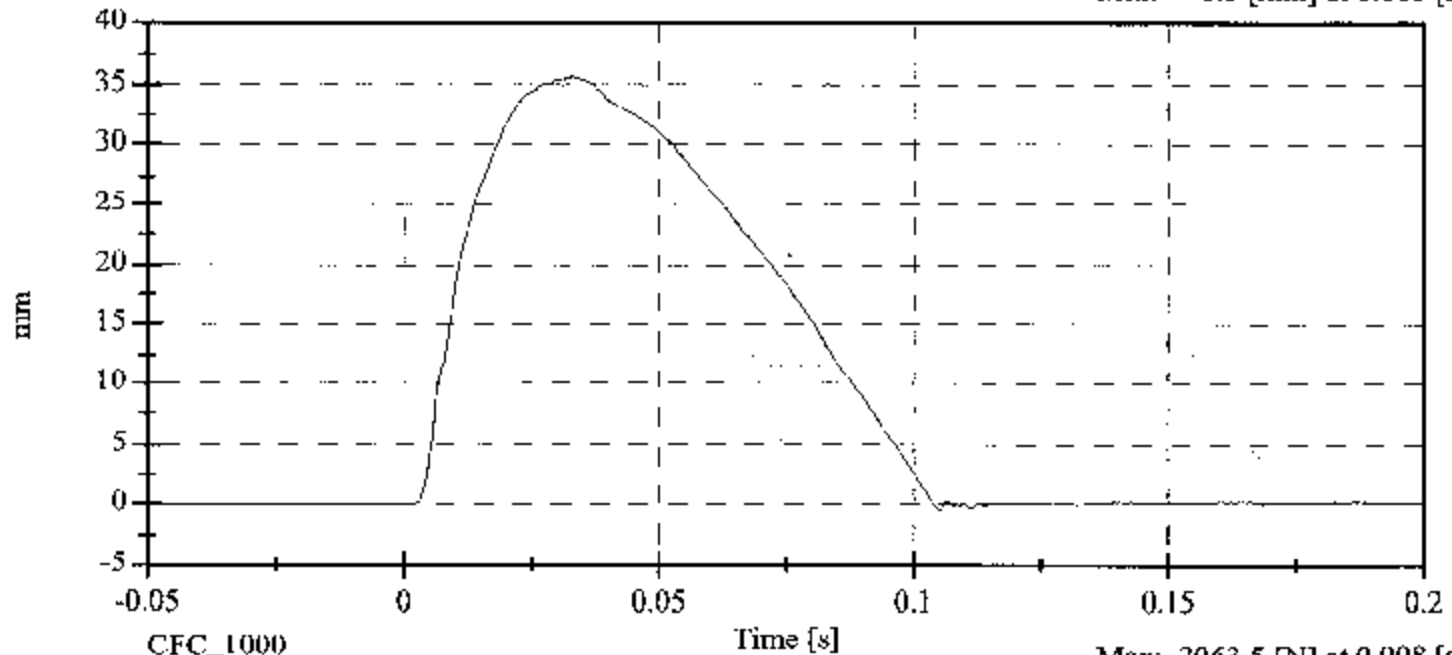
TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	29.00 %	Passed
Displacement:	32.00-37.00 mm	35.62 mm	Passed
Maximum Force:	1730.00-2099.00 N	2063.48 N	Passed

015 Shock Medium

Displacement vs. Time

Max: 35.6 [mm] at 0.033 [s]

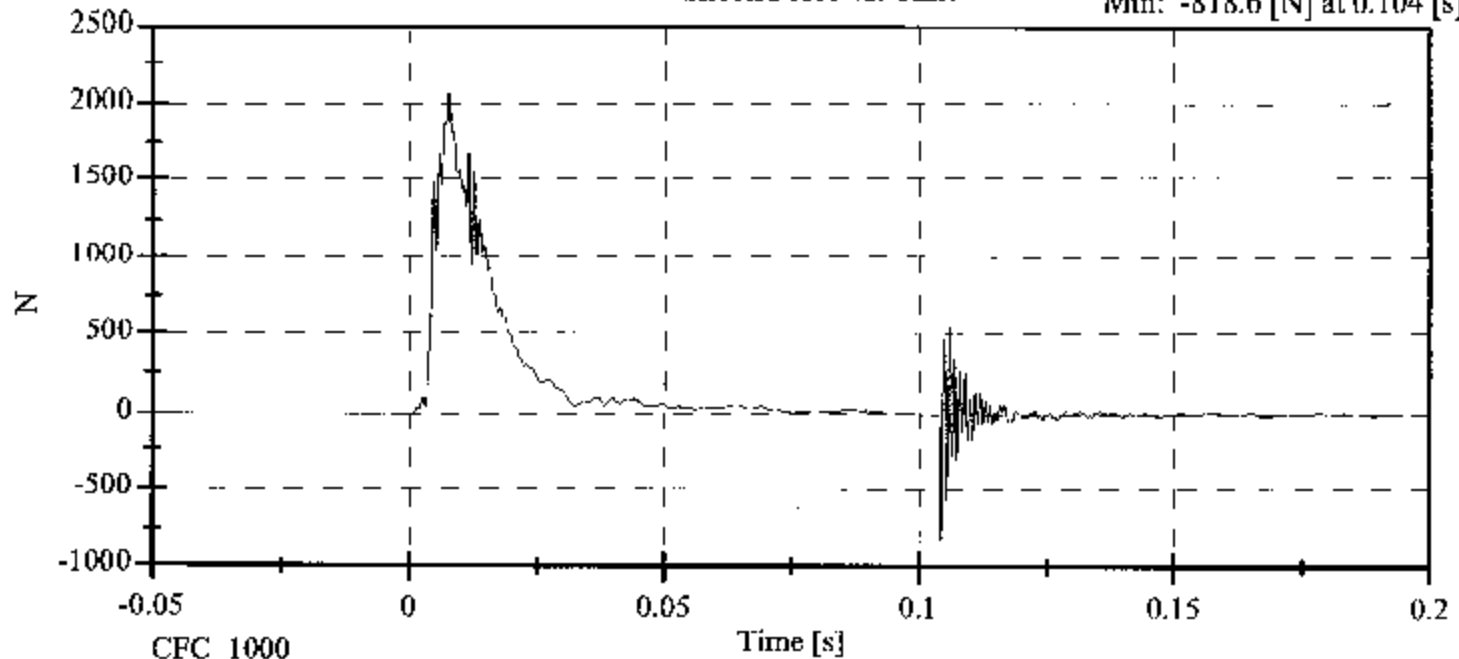
Min: -0.5 [mm] at 0.105 [s]



Shock Force vs. Time

Max: 2063.5 [N] at 0.008 [s]

Min: -818.6 [N] at 0.104 [s]



015 Shock High at 6.10 m/s

High Part 572F Shock Absorber Impact

Calibration Date: 02-03-03

Serial No: 015

Work File: 015SH 2-03-03

-----TEST RESULTS-----

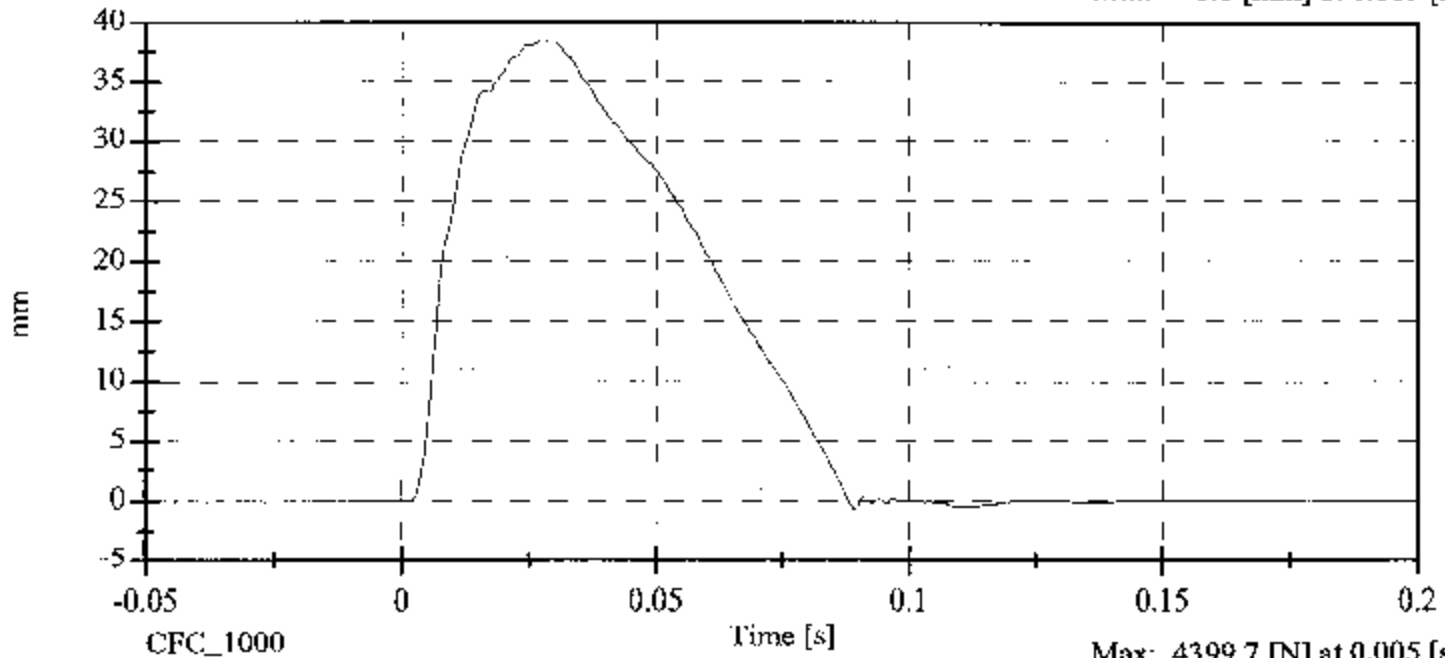
TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	29.00 %	Passed
Displacement:	33.00-40.00 mm	38.49 mm	Passed
Maximum Force:	3741.00-4448.00 N	4399.67 N	Passed

015 Shock High

Displacement vs. Time

Max: 38.5 [mm] at 0.028 [s]

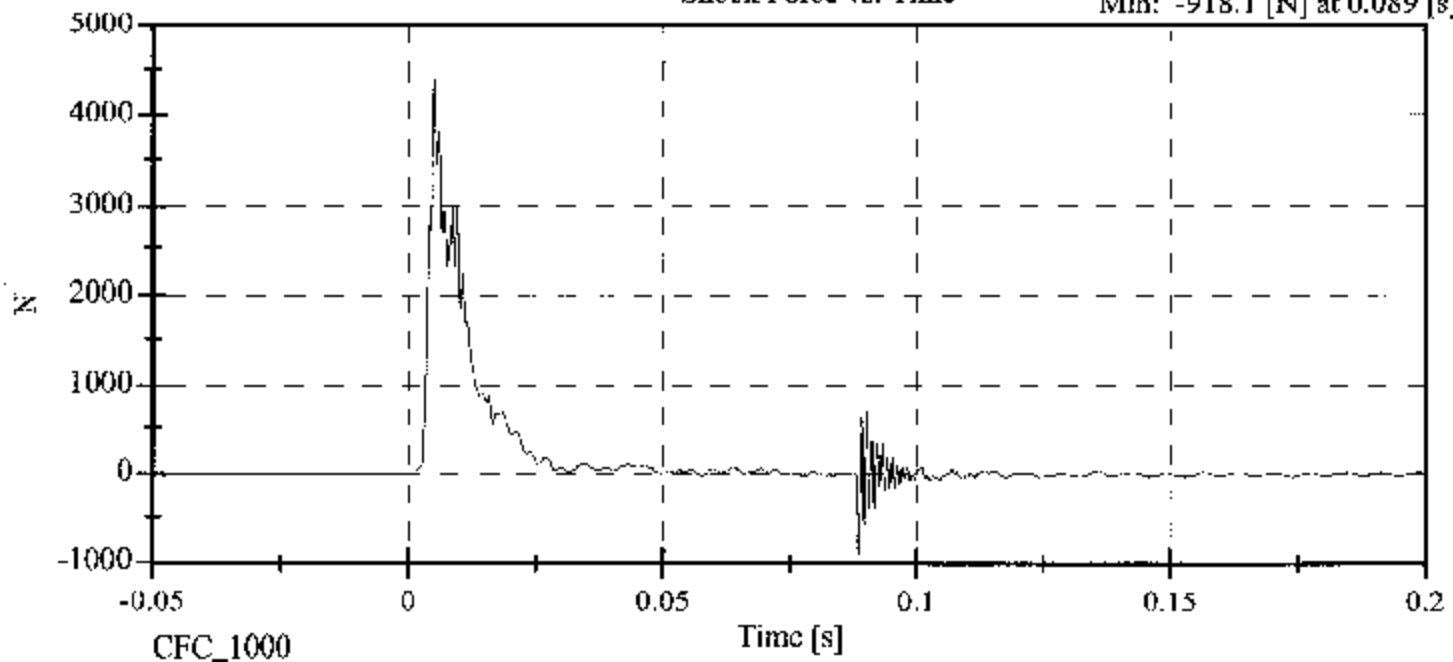
Min: -0.6 [mm] at 0.089 [s]



Shock Force vs. Time

Max: 4399.7 [N] at 0.005 [s]

Min: -918.1 [N] at 0.089 [s]



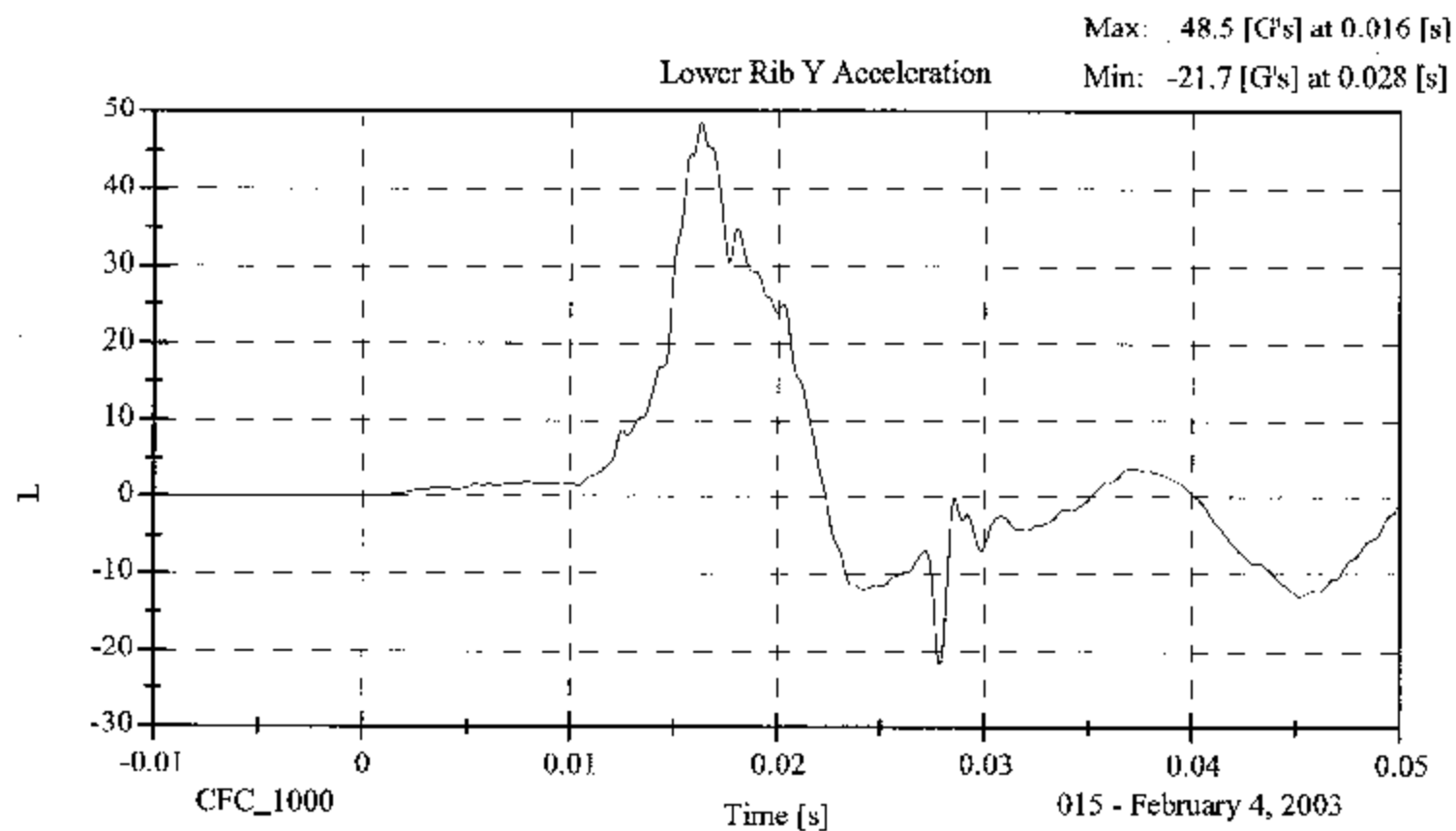
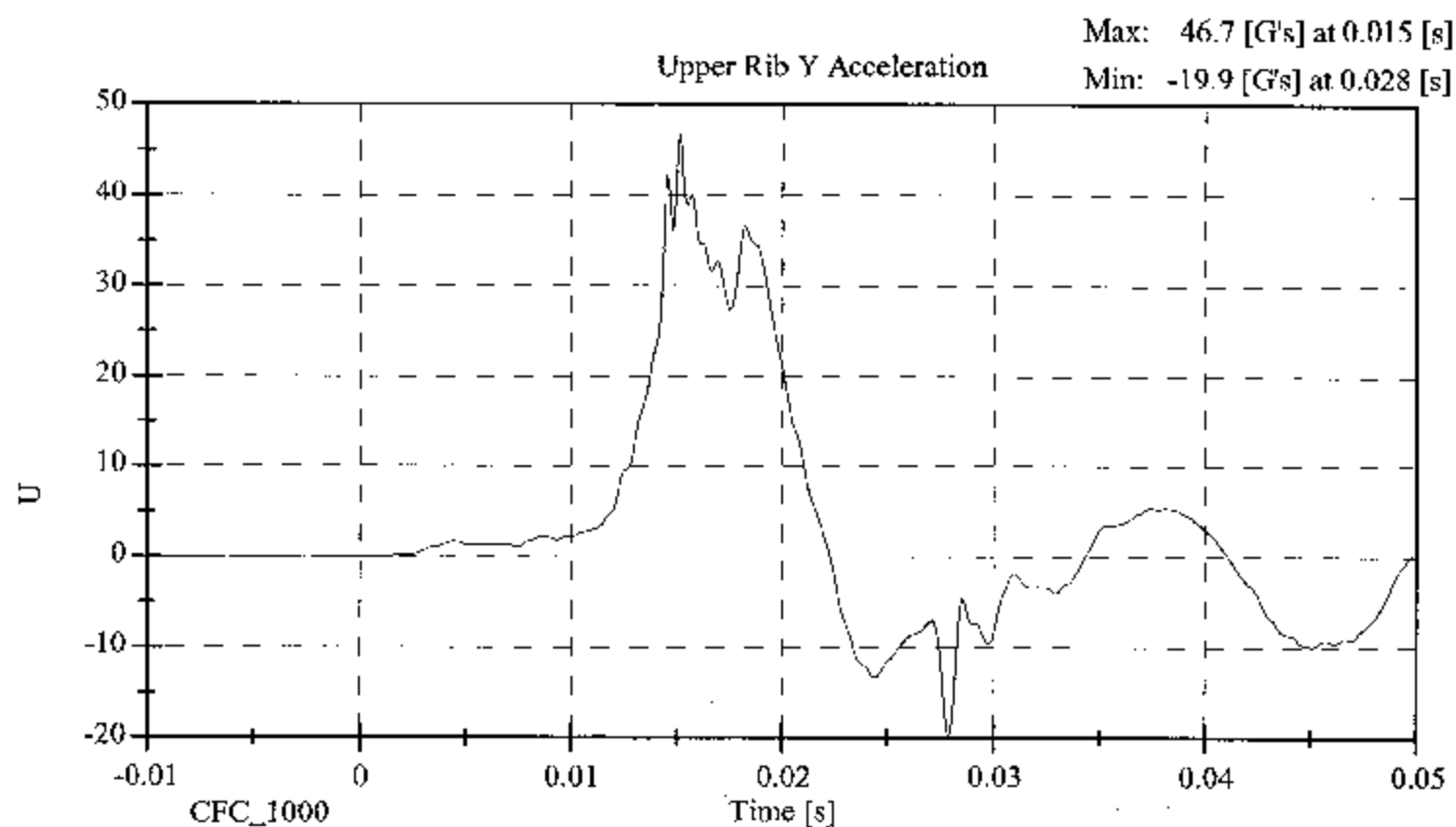
**LATERAL THORAX IMPACT TEST
PRE-TEST**

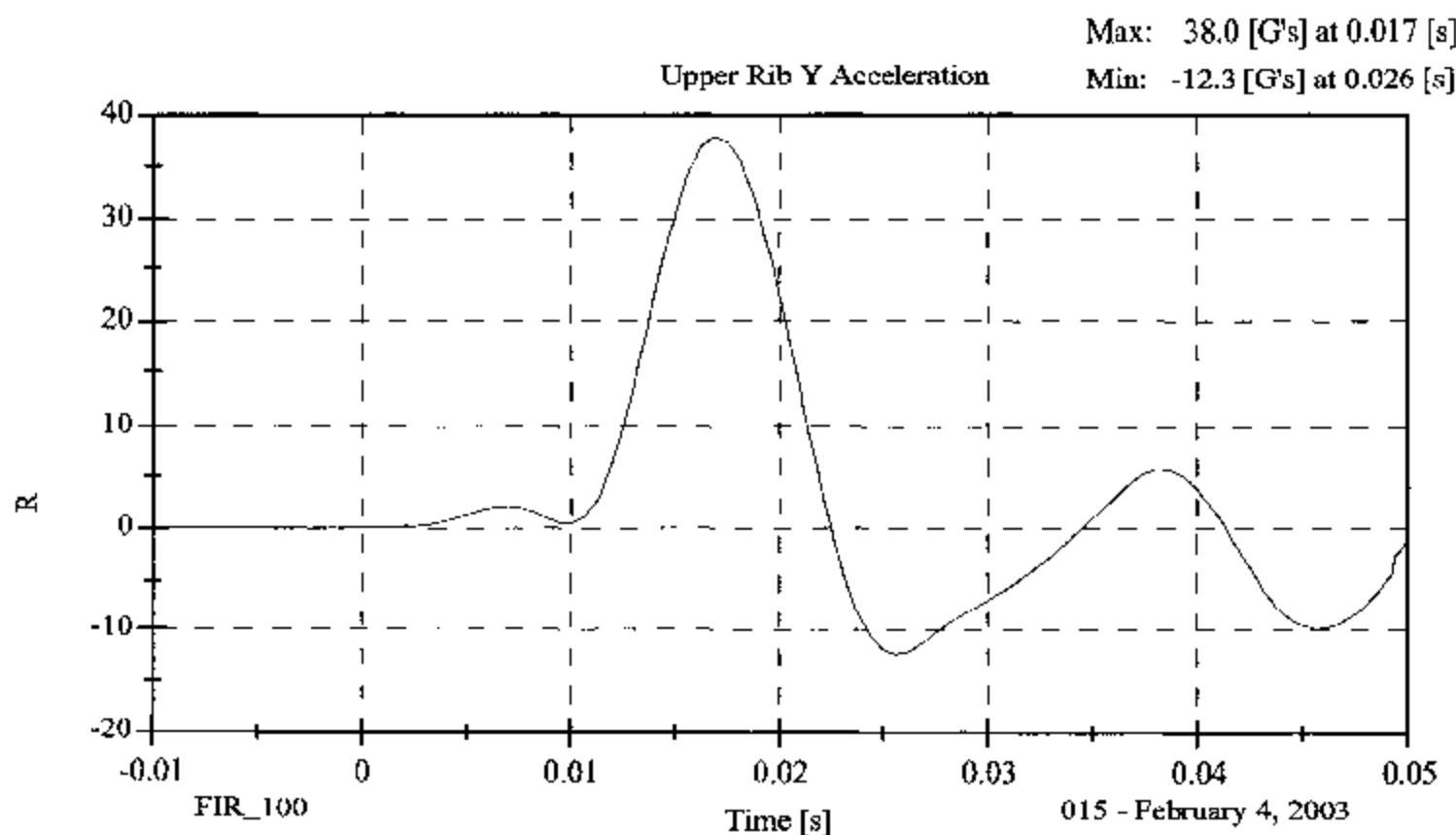
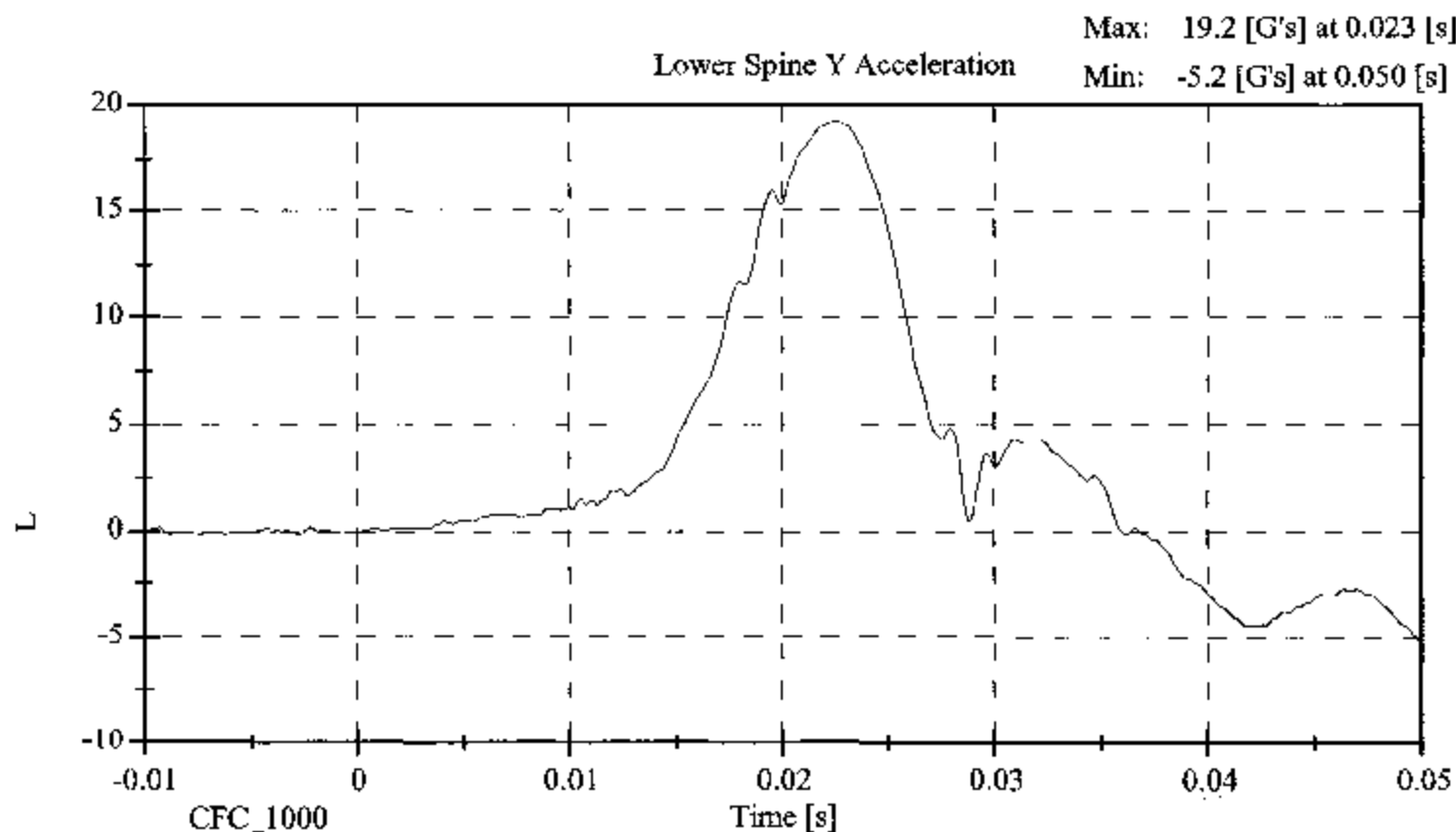
CONFIGURED FOR LEFT SIDE IMPACT

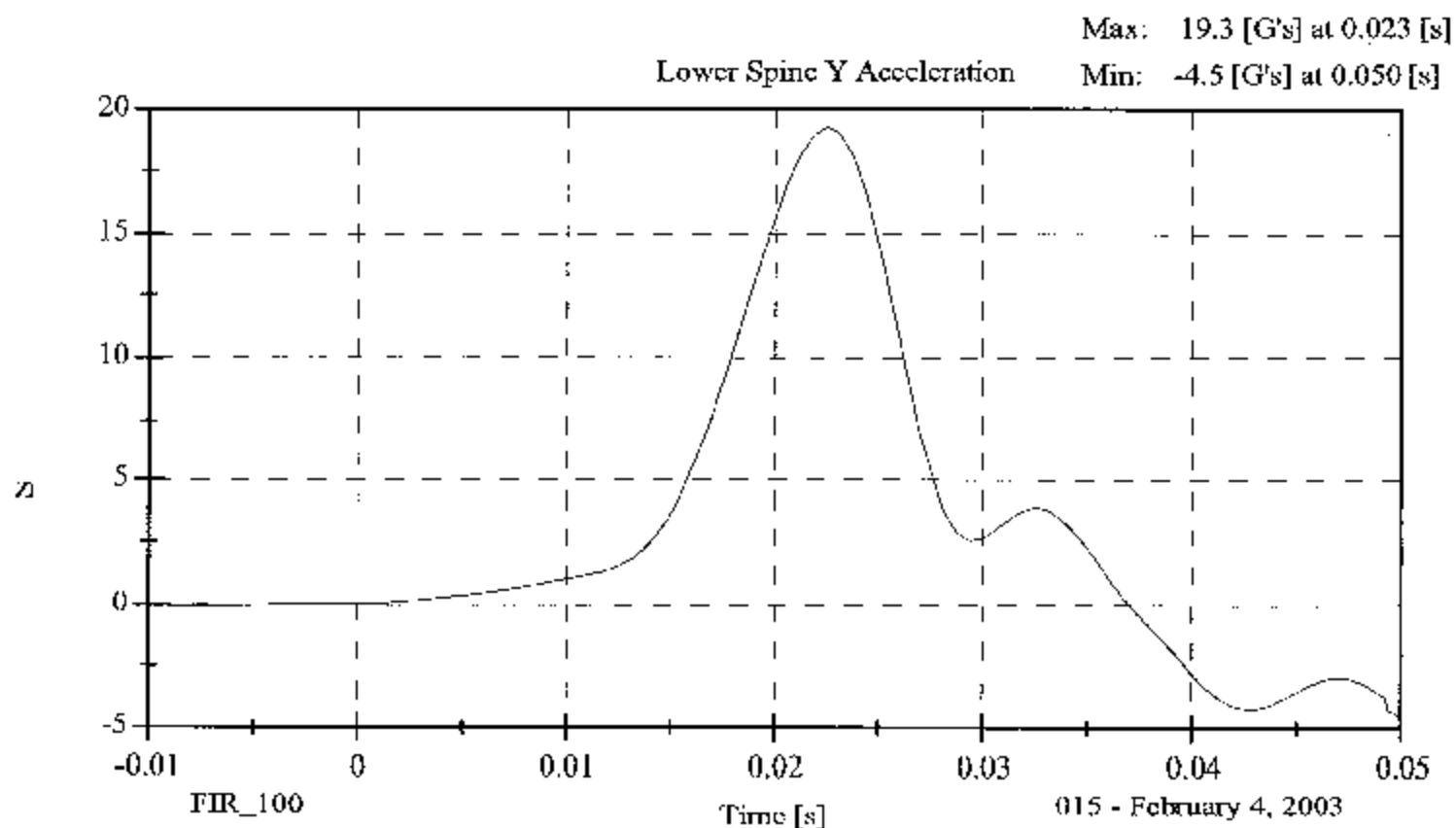
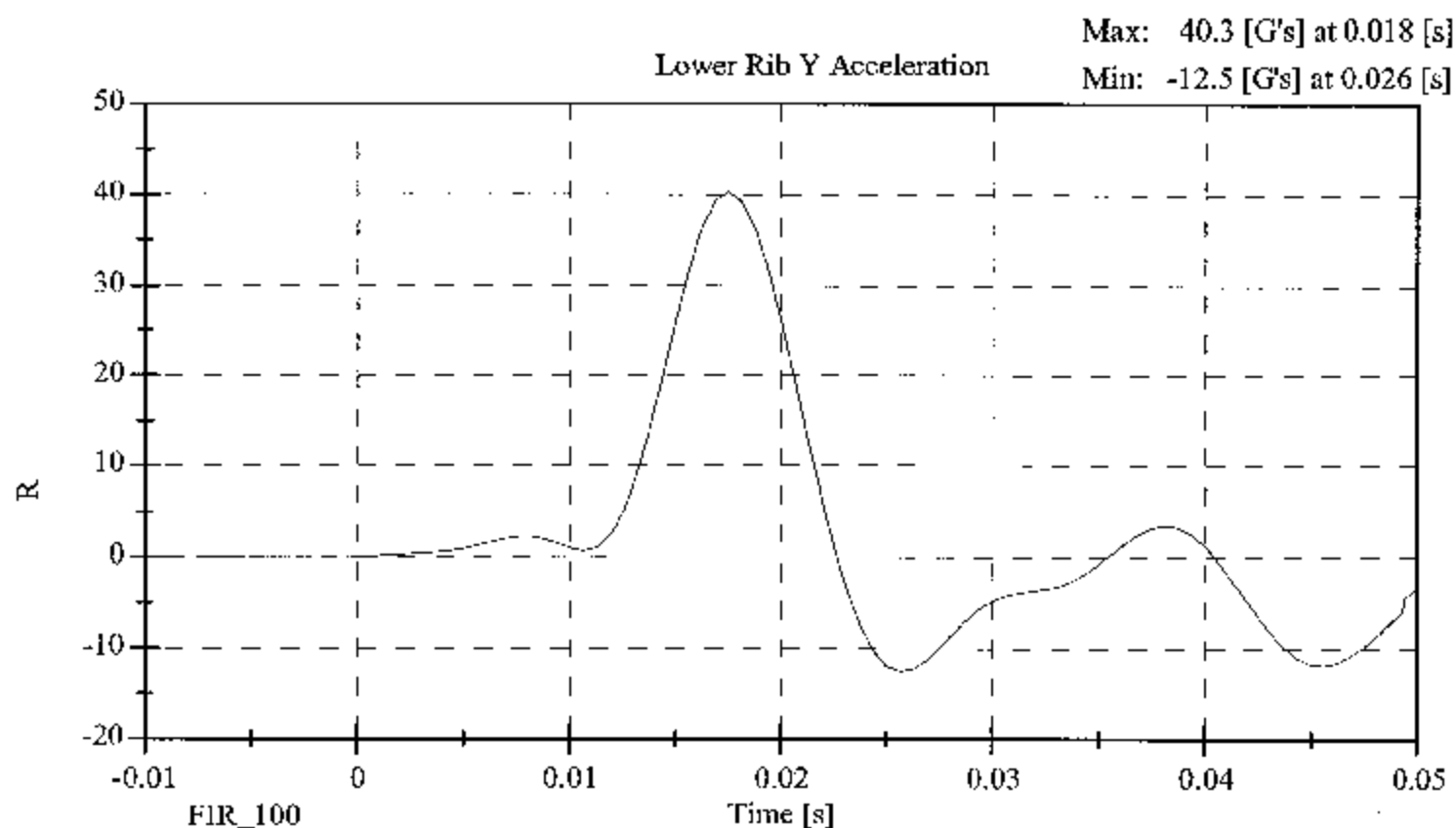
SID Serial No.: 015 Sequential Test Number: 1
Date: February 4, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	20.6
RELATIVE HUMIDITY (%)	10 - 70	40.00
PROBE SPEED (m/s)	4.27 - 4.33	4.28
UPPER RIB (g's)	37 - 46	37.97
LOWER RIB (g's)	37 - 46	40.30
LOWER SPINE (g's)	15 - 22	19.33

REMARKS: None







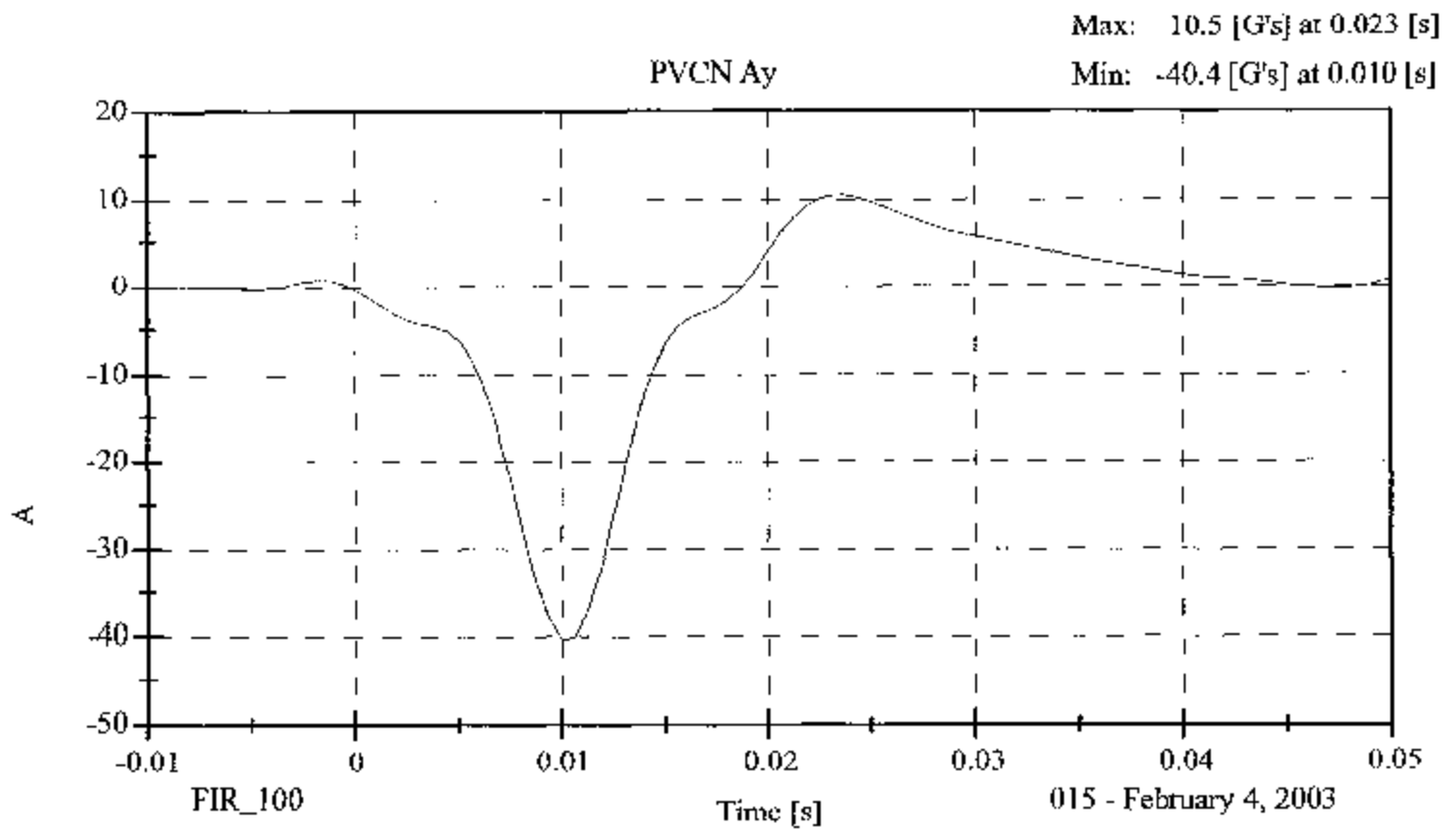
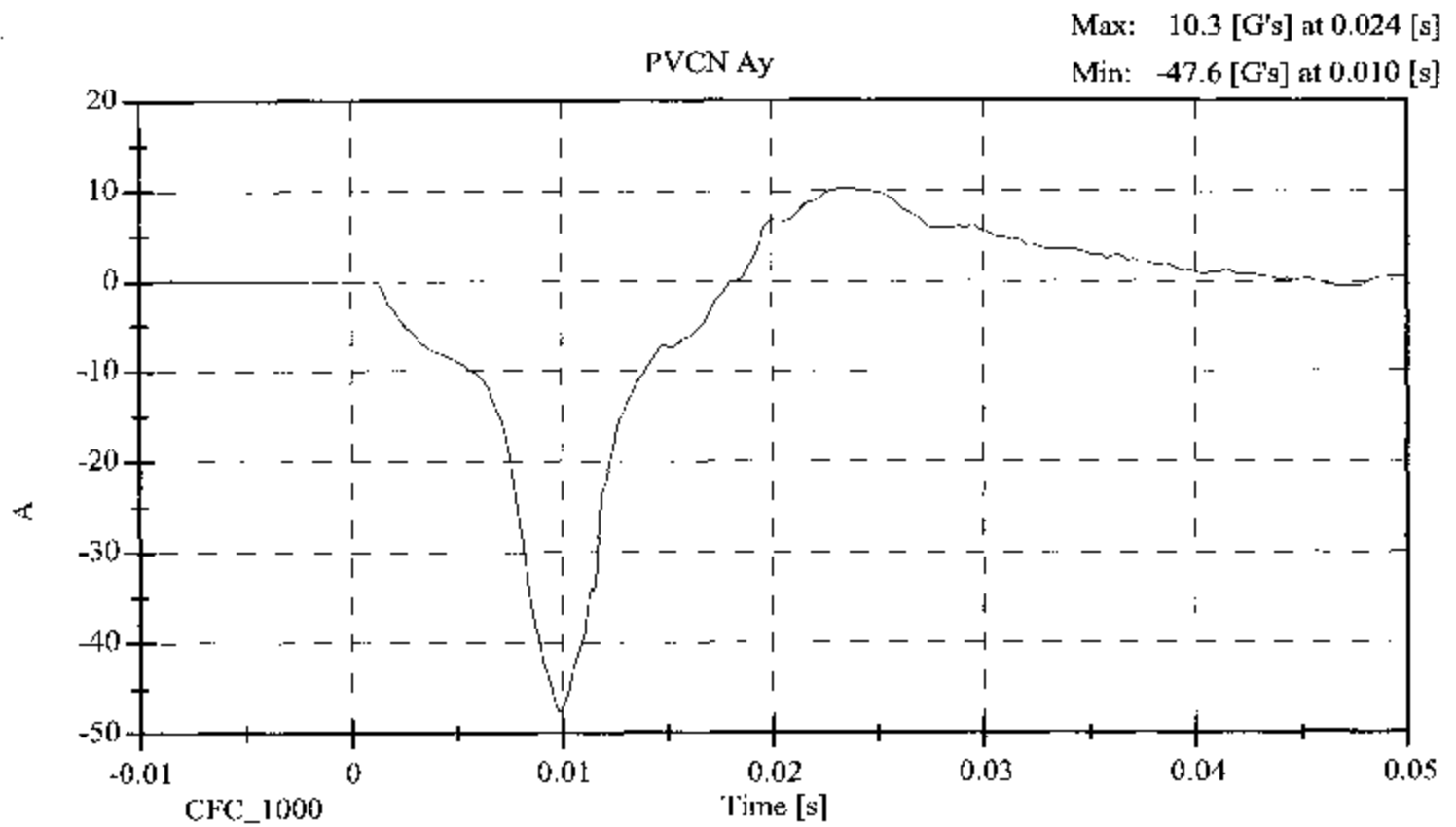
**LATERAL PELVIS IMPACT TEST
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
Date: February 4, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	20.6
RELATIVE HUMIDITY (%)	10 - 70	40.0
PROBE SPEED (m/s)	4.27 - 4.33	4.32
PELVIS ACCELERATION (g's)	40 - 60	40.43

REMARKS: None



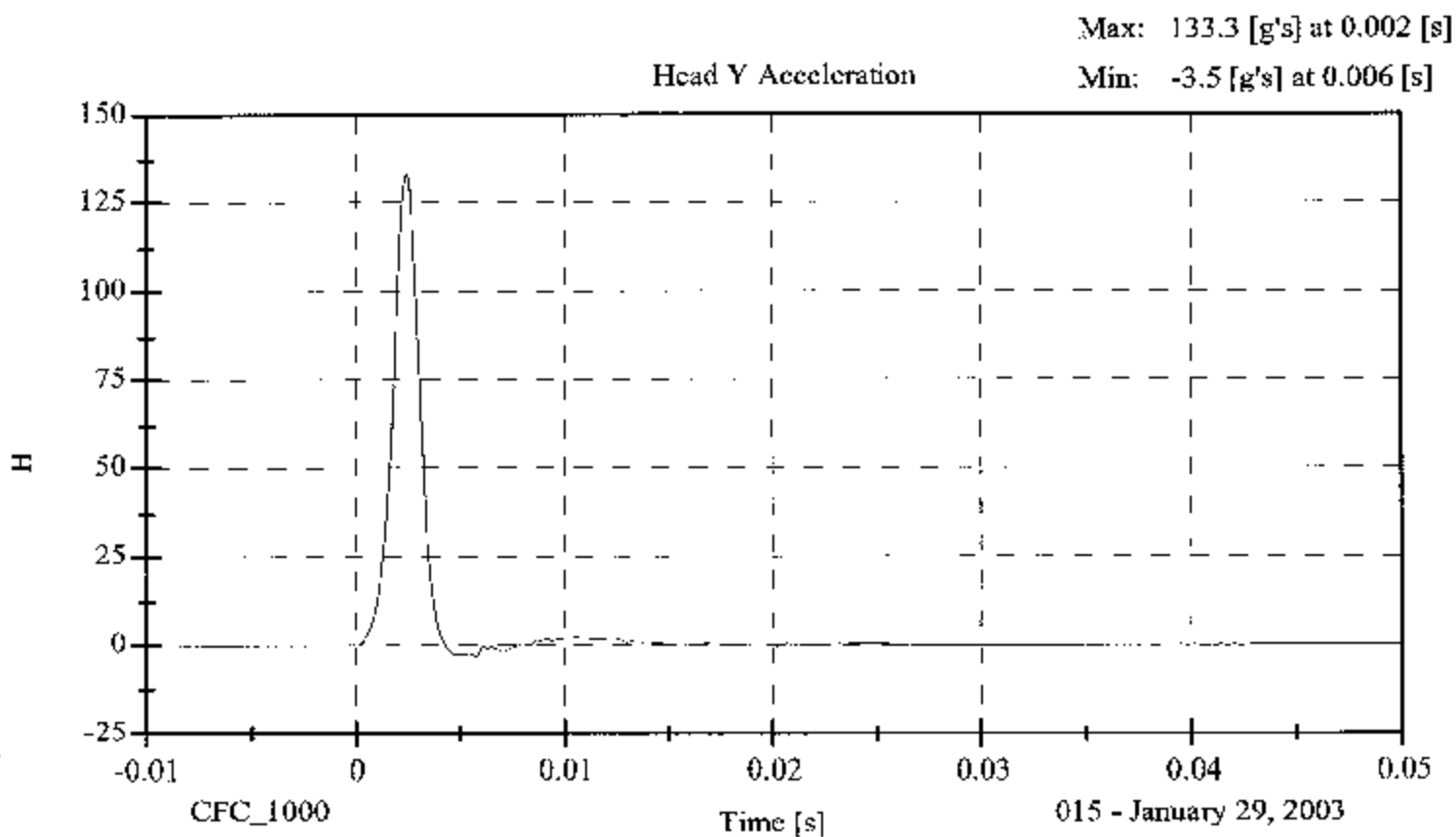
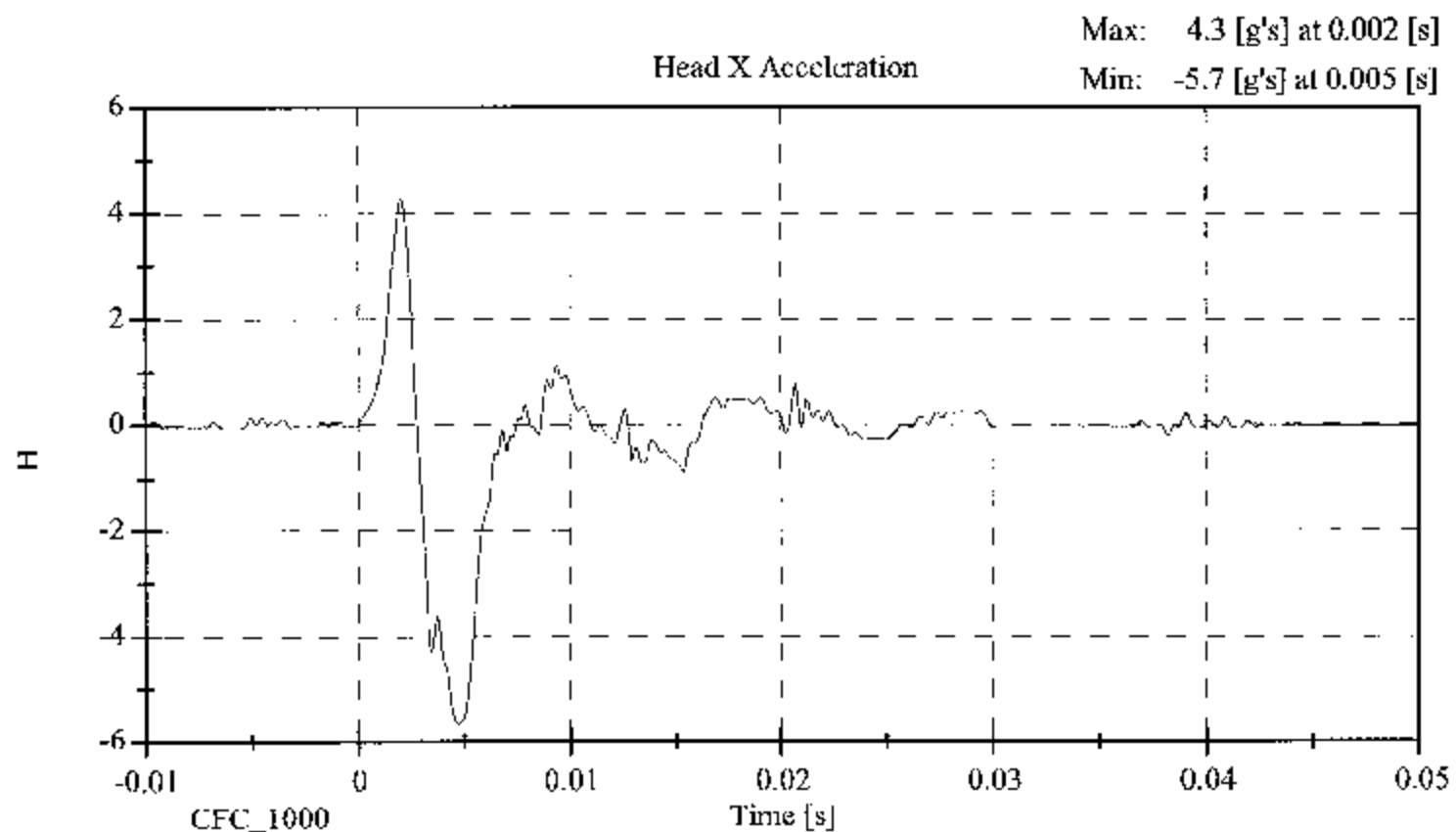
**HEAD DROP TEST
PRE-TEST**
(Test not required for SID certification)

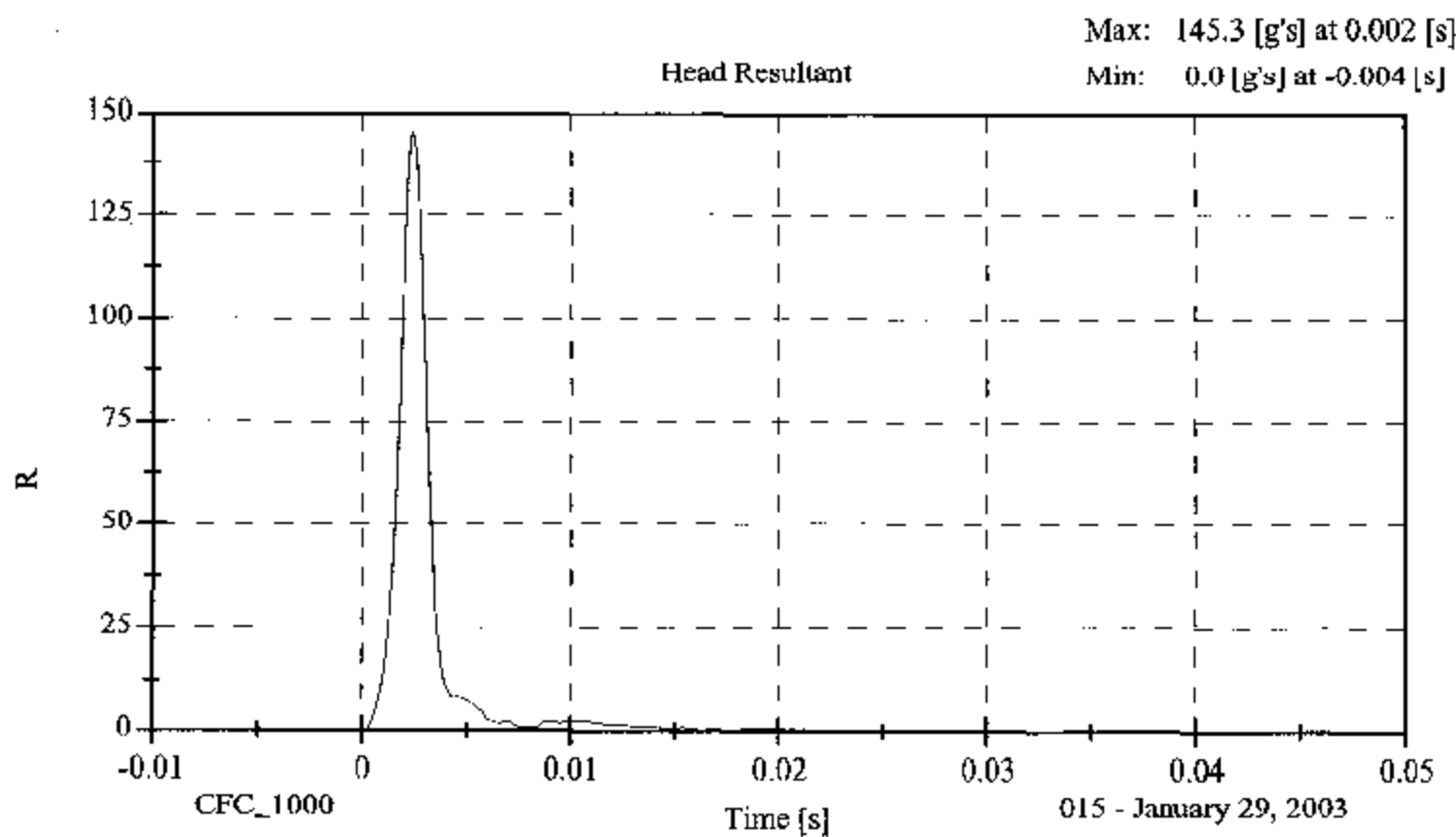
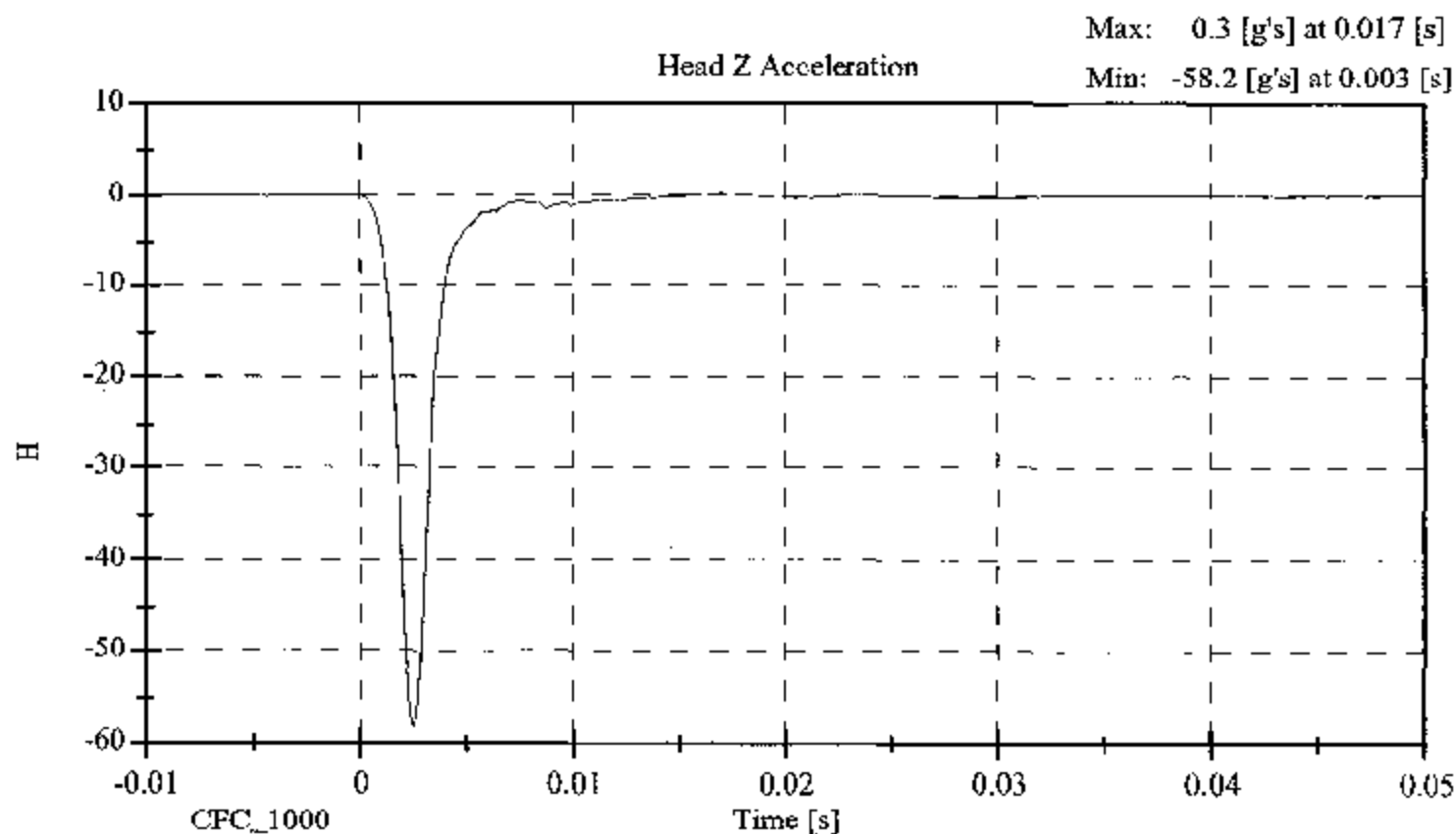
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
Date: February 4, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	20.6 - 22.2	21.1
RELATIVE HUMIDITY (%)	10 - 70	34.00
PEAK RESULTANT ACCELERATION (Gs)	120 - 150	145.26
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 15	4.27
CURVE PERCENT NONMODAL (%)	< 15	5.45

REMARKS: None





ABDOMINAL COMPRESSION TEST
PRE-TEST
(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
Date: February 4, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	40.0
FORCE @ 13 mm (N)	104 - 162	116.1
FORCE @ 19 mm (N)	163 - 221	182.4
FORCE @ 25 mm (N)	222 - 280	258.9
FORCE @ 33 mm (N)	325 - 391	378.1

REMARKS: None

Dummy S/N 015

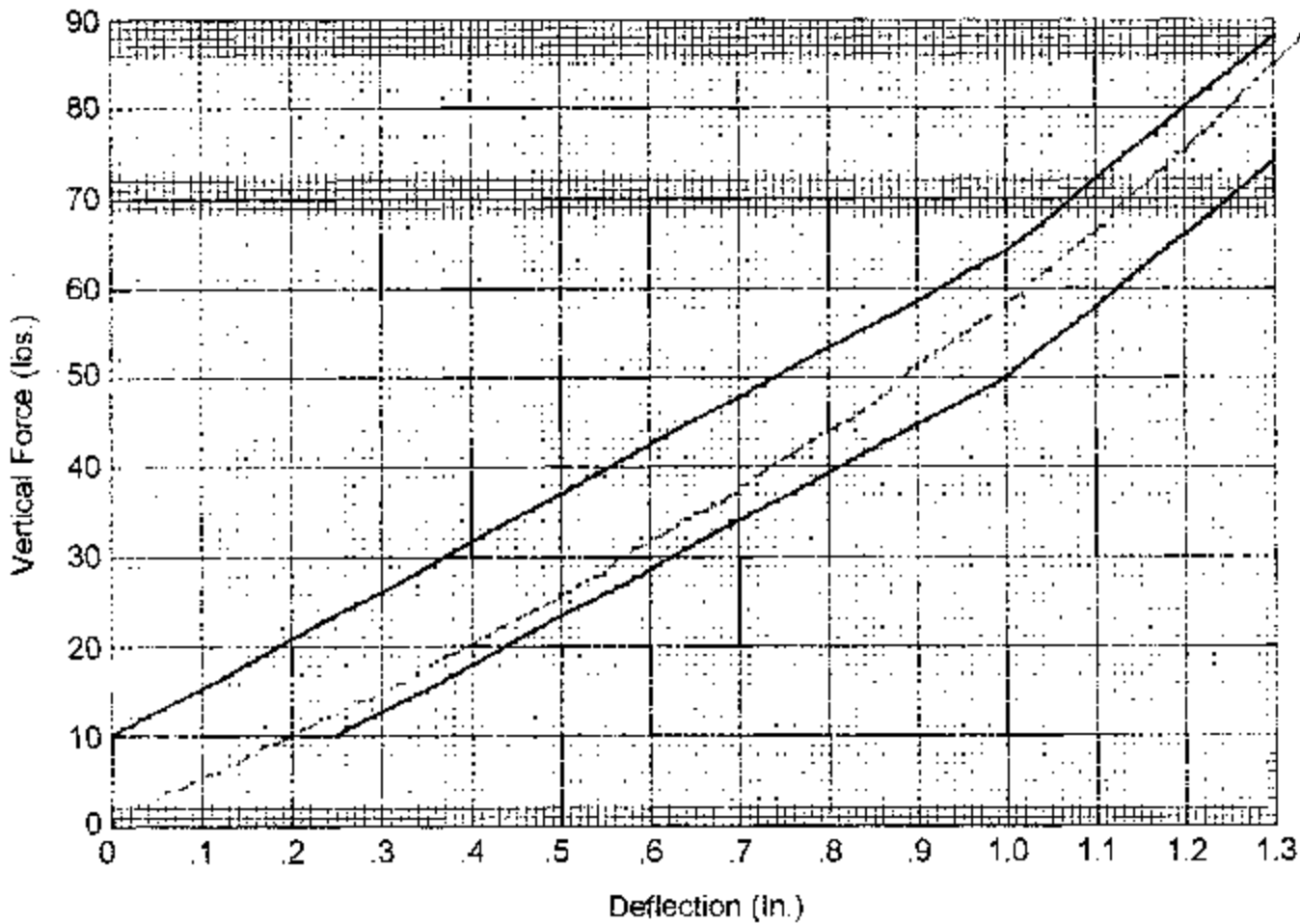
W/A

Date 2-4-03

Performed By BS

Temp. 70°

Humidity 40%



Hybrid II
Abdomen Static Press

LUMBAR FLEXION TEST
PRE-TEST
(Test not required for SID certification)

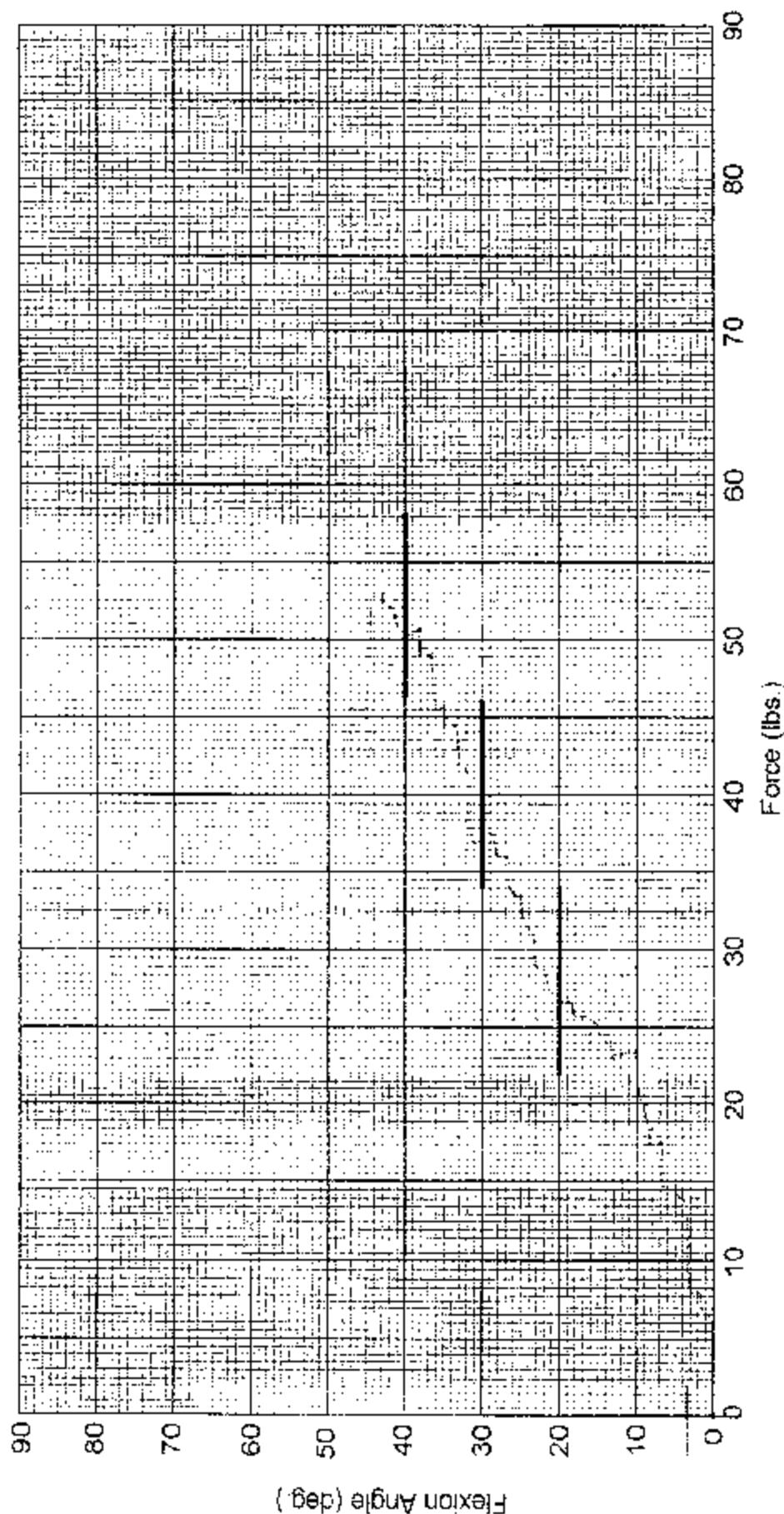
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
Date: February 4, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	40.0
FORCE @ 0° (N)	0 - 26.7	0.0
FORCE @ 20° (N)	97.8 - 151.2	117.9
FORCE @ 30° (N)	151.2 - 204.6	168.9
FORCE @ 40° (N)	204.6 - 258	224.6
RETURN ANGLE	12° max.	3.5

REMARKS: None

Dummy S/N 015
W/A _____
Date 2-4-03
Performed By [Signature]
Temp. 70°
Humidity 40%



Hybrid II Lumbar Spine Flexion Test

PRE-TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
 Date: February 4, 2003 Laboratory Technician: B. Swiecicki

PART	ITEMS CHECKED	COMMENTS
SKIN	VISUAL INSPECTION	OK
HEAD	VISUAL, BALLAST, ACCELEROMETER MOUNT	OK
NECK	VISUAL, CABLE TORQUE	OK
SPINE BOX	VISUAL, BALLAST, WELDMENT, ACCELEROMETER MOUNT	OK
RIB CAGE	VISUAL, MEASURE, STIFFENERS	OK
STERNUM	VISUAL	OK
LUMBAR SPINE	VISUAL	OK
ABDOMEN	VISUAL	OK
PELVIS	VISUAL, PALPATE, ACCELEROMETER MOUNT	OK
UPPER LEGS	VISUAL	OK
KNEES	VISUAL, STOPS, INSERTS	OK
LOWER LEGS	VISUAL, RANGE OF MOTION	OK
ANKLES	VISUAL, RANGE OF MOTION	OK
FEET	VISUAL, RANGE OF MOTION	OK
JOINTS	1 TO 2 g RANGE	OK
OTHER	NONE	-

REMARKS: None

CALIBRATION TEST RESULTS

PRE-TEST

SID NO.: 016

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
Date: February 4, 2003 Laboratory Technician: B. Swicicki

TEST	COMMENTS
EXTERNAL DIMENSIONS	Passed all requirements.
LATERAL THORAX IMPACT TEST	Passed all requirements.
LATERAL PELVIS IMPACT TEST	Passed all requirements.
HEAD DROP TEST*	Passed all requirements.
ABDOMINAL COMPRESSION TEST*	Passed all requirements.
LUMBAR FLEXION TEST*	Passed all requirements.
LUMBAR FLEXION TEST*	Passed all requirements.

* Test not required for SID certification.

REMARKS: None

EXTERNAL DIMENSIONS
PRE-TEST

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
Date: February 4, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	902
RH- Rib Height (mm)	502 - 520	513
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	236
KH- Knee Pivot from Back Line (mm)	511 - 526	521
KV- Knee Pivot to Floor (mm)	490 - 505	495
HW- Hip Width (mm)	356 - 391	368

REMARKS: None

**THORACIC SHOCK ABSORBER TESTS
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
Date: February 3, 2003 Laboratory Technician: B. Swiecicki

DAMPER IDENTIFICATION: 016

TEST PARAMETER		SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)		18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)		10 - 70	79
VELOCITY 3.05 m/s	FORCE (N)	836 - 1125	951.92
	DISPLACEMENT (mm)	30 - 35	34.41
VELOCITY 4.27 m/s	FORCE (N)	1730 - 2099	1877.47
	DISPLACEMENT (mm)	32 - 37	36.94
VELOCITY 6.10 m/s	FORCE (N)	3741 - 4448	4426.58
	DISPLACEMENT (mm)	33 - 40	39.14

DAMPER SETTING: 5

REMARKS: None

016 Shock Low at 3.05 m/s

Low Part 572F Shock Absorber Impact

Calibration Date:

02-03-03

Serial No:

016

Work File:

016SL 2-03-03

TEST RESULTS

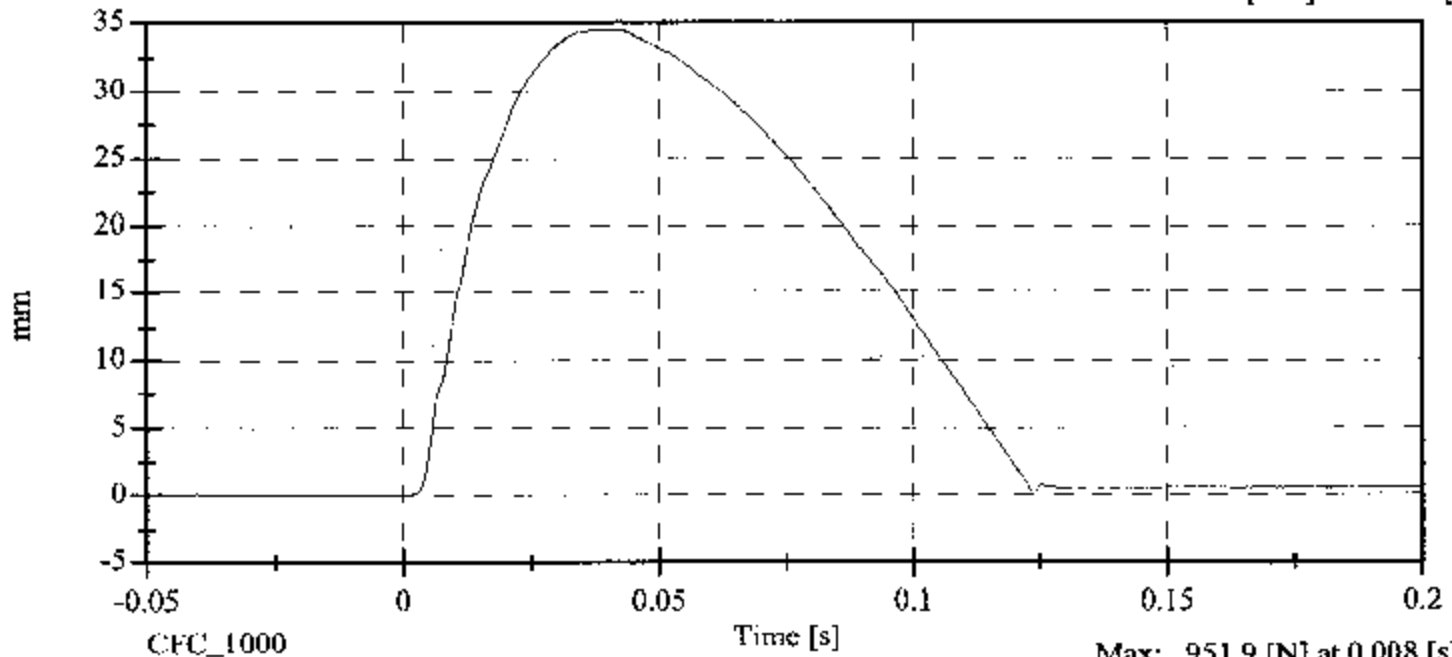
TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	29.00 %	Passed
Displacement:	30.00-35.00 mm	34.41 mm	Passed
Maximum Force:	836.00-1125.00 N	951.92 N	Passed

016 Shock Low

Displacement vs. Time

Max: 34.4 [mm] at 0.037 [s]

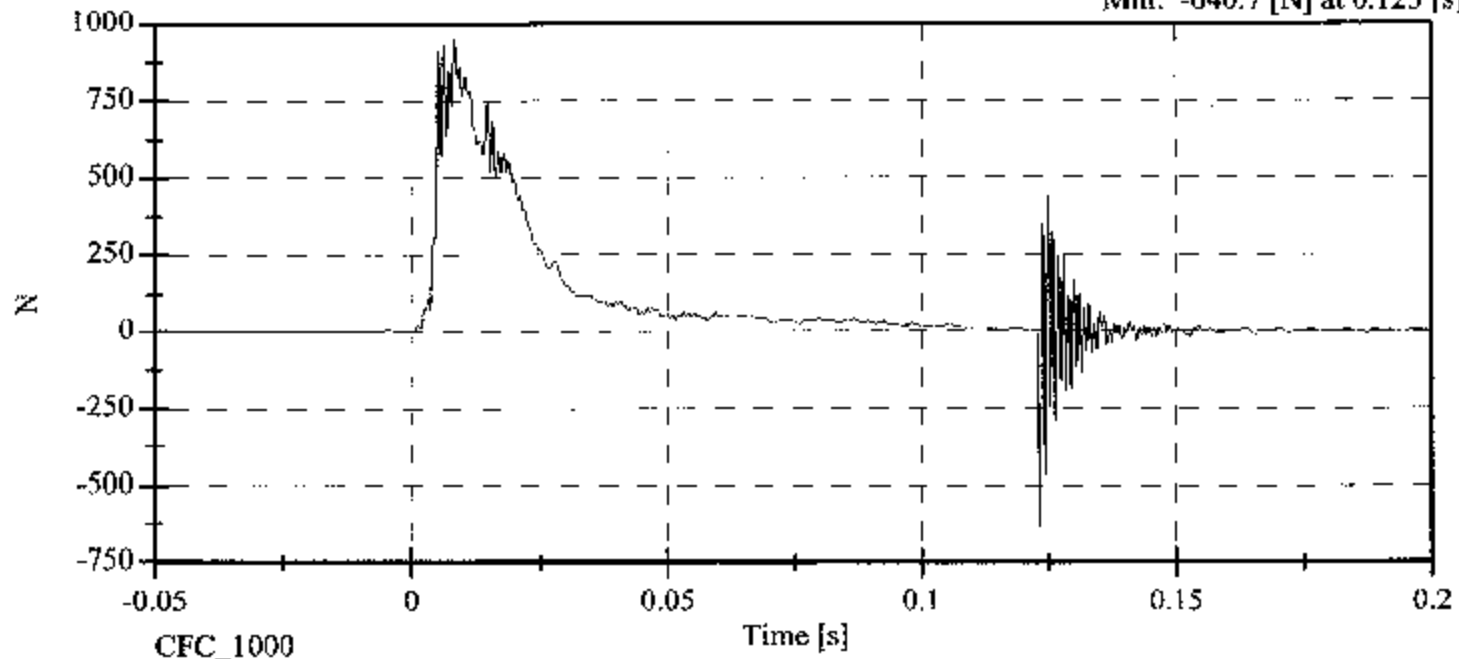
Min: -0.0 [mm] at -0.029 [s]



Shock Force vs. Time

Max: 951.9 [N] at 0.008 [s]

Min: -640.7 [N] at 0.123 [s]



016 Shock Medium at 4.27 m/s

Medium Part 572F Shock Absorber Impact

Calibration Date:

02-03-03

Serial No: 016

Work File:

016SM 2-03-03

TEST RESULTS

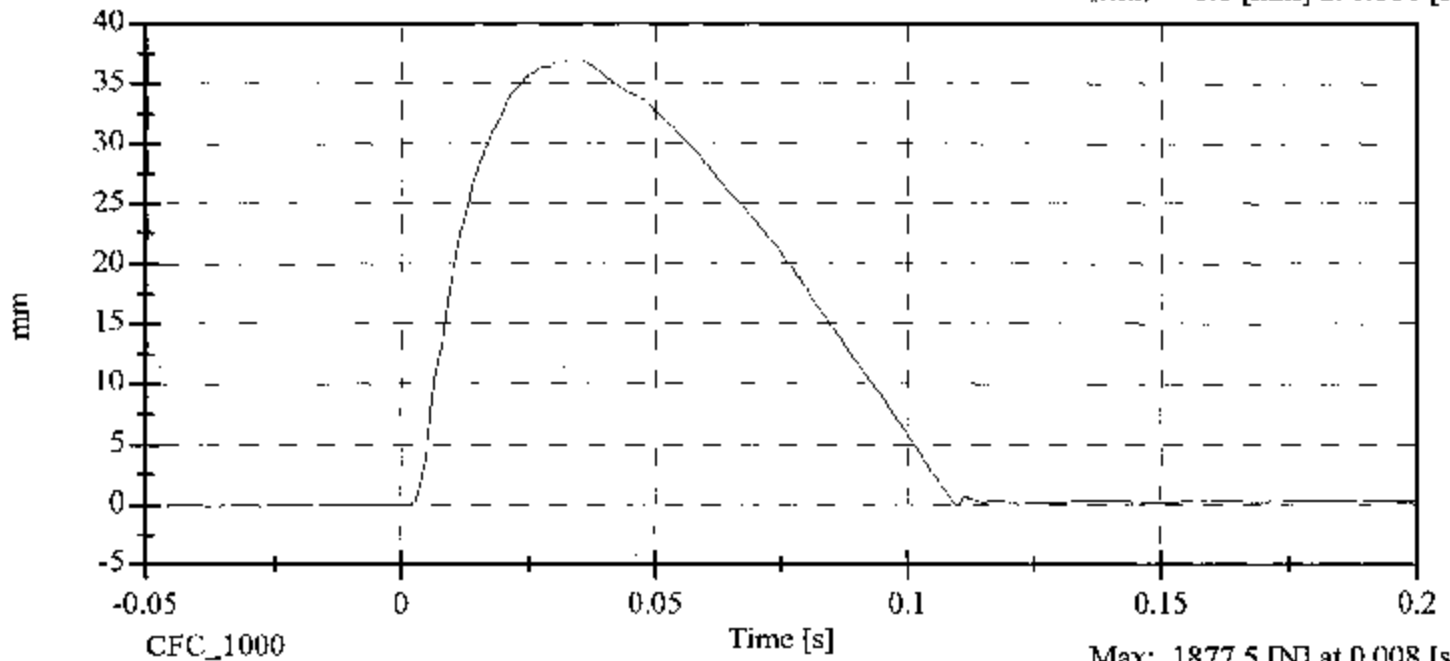
TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	29.00 %	Passed
Displacement:	32.00-37.00 mm	36.94 mm	Passed
Maximum Force:	1730.00-2099.00 N	1877.47 N	Passed

016 Shock Medium

Displacement vs. Time

Max: 36.9 [mm] at 0.033 [s]

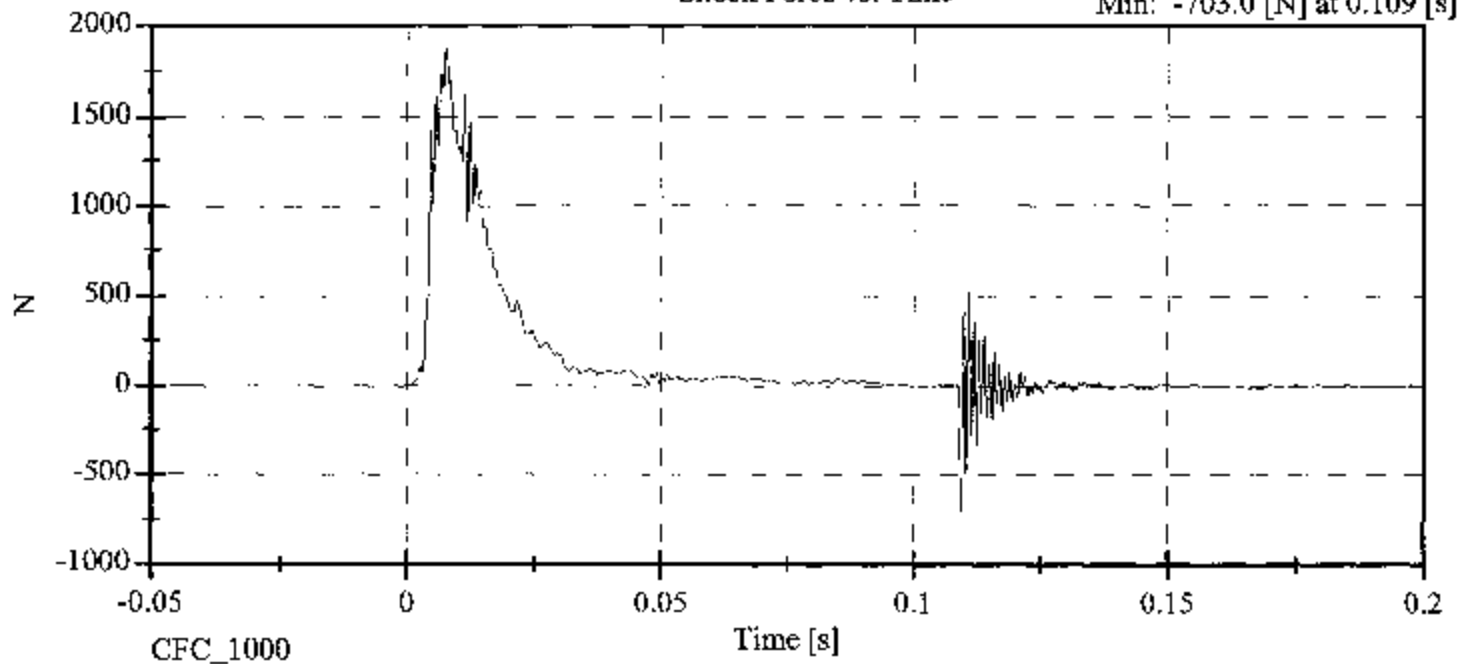
Min: -0.1 [mm] at 0.110 [s]



Shock Force vs. Time

Max: 1877.5 [N] at 0.008 [s]

Min: -703.0 [N] at 0.109 [s]



016 Shock High at 6.10 m/s

High Part 572F Shock Absorber Impact

Calibration Date: 02-03-03

Serial No: 016

Work File: 016SH 2-03-03

TEST RESULTS

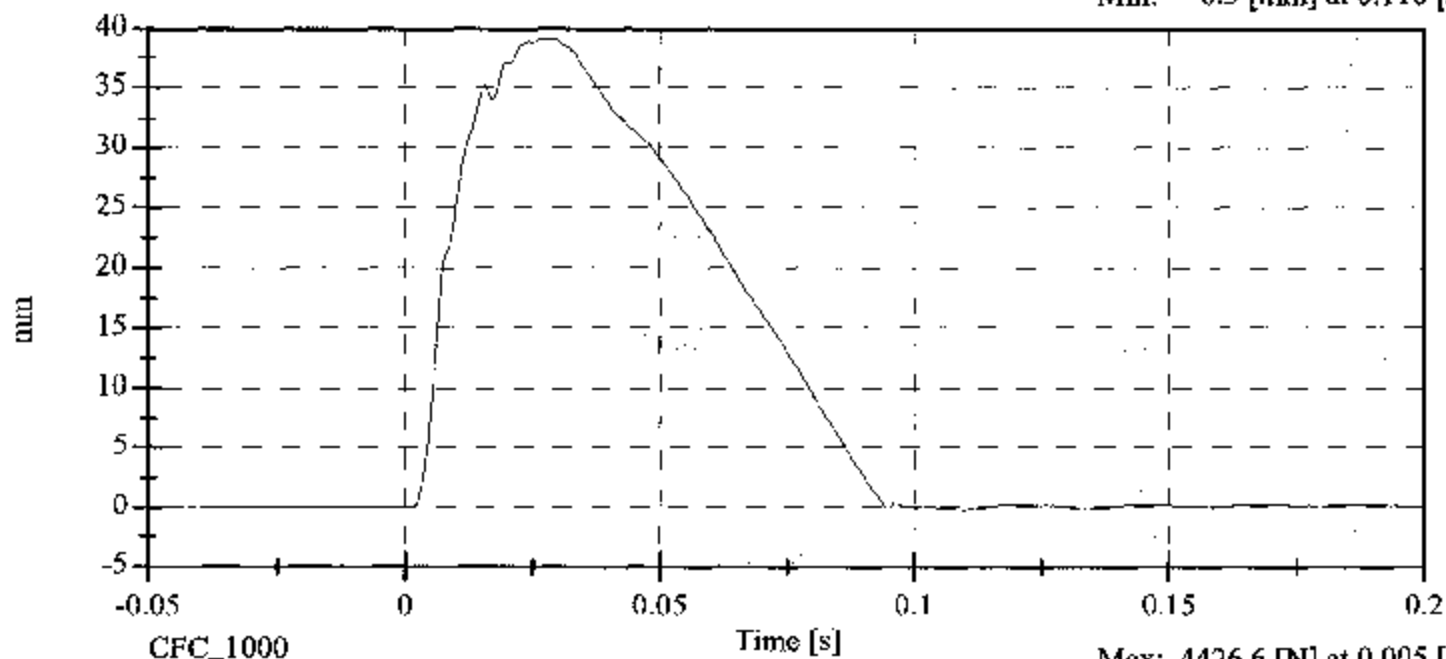
TEST CONDITION	PARAMETERS	RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	29.00 %	Passed
Displacement:	33.00-40.00 mm	39.14 mm	Passed
Maximum Force:	3741.00-4448.00 N	4426.58 N	Passed

016 Shock High

Displacement vs. Time

Max: 39.1 [mm] at 0.027 [s]

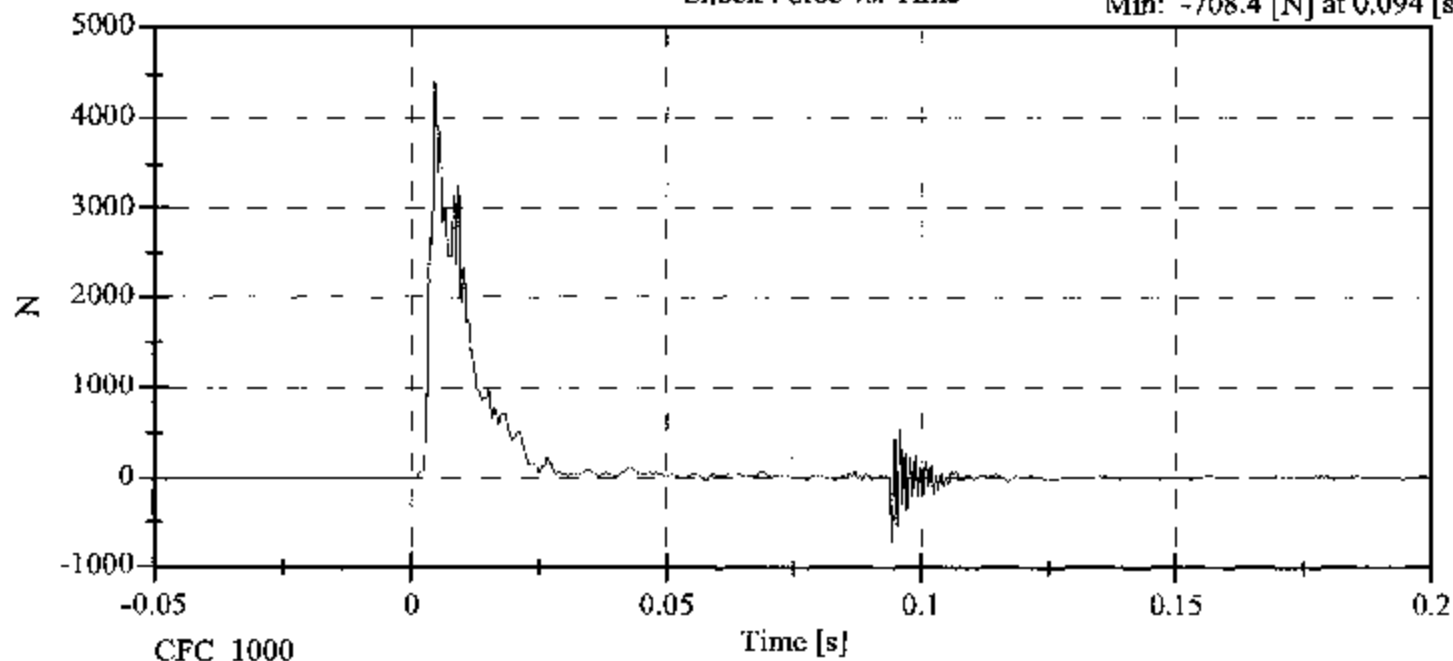
Min: -0.3 [mm] at 0.110 [s]



Shock Force vs. Time

Max: 4426.6 [N] at 0.005 [s]

Min: -708.4 [N] at 0.094 [s]



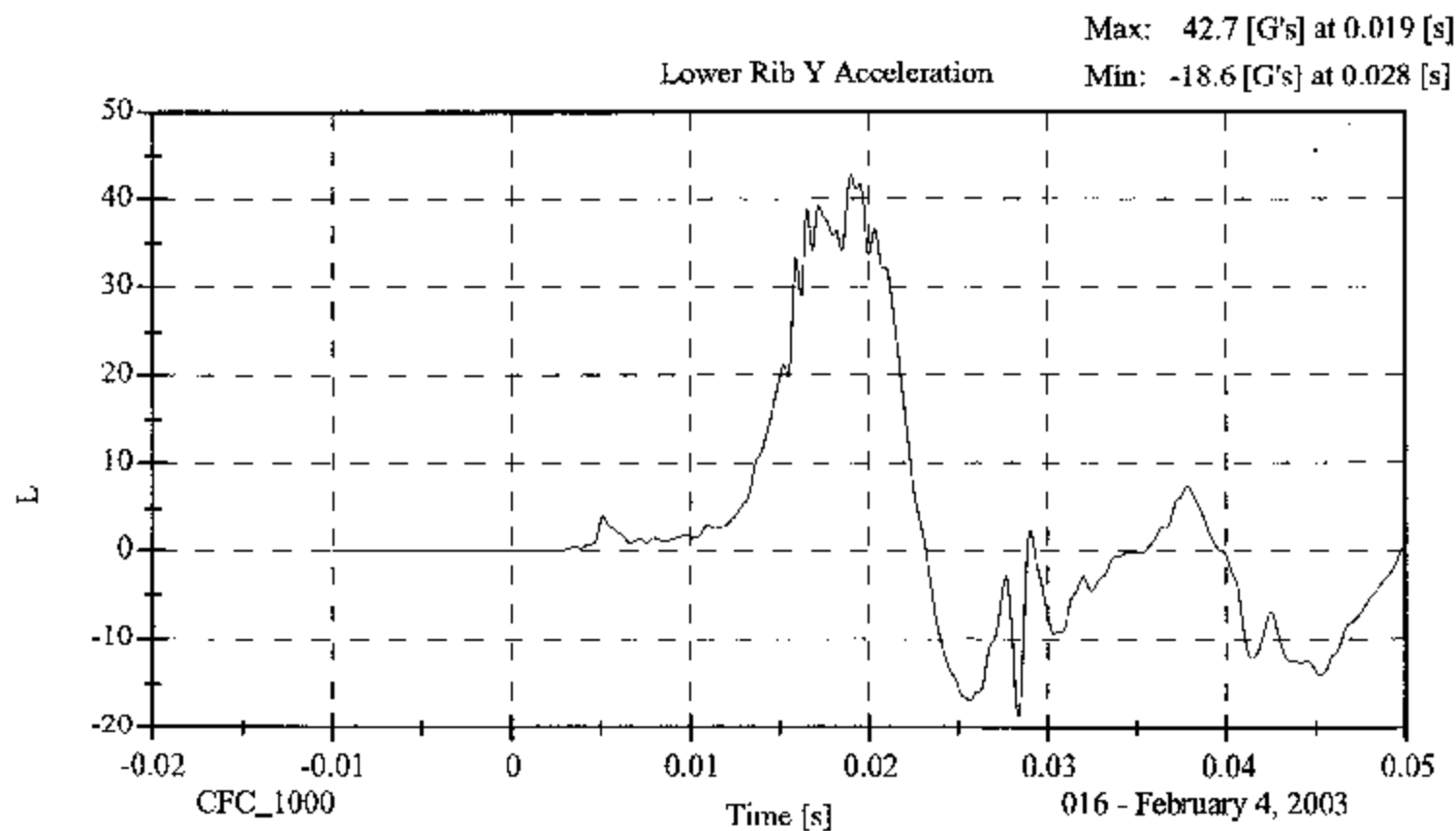
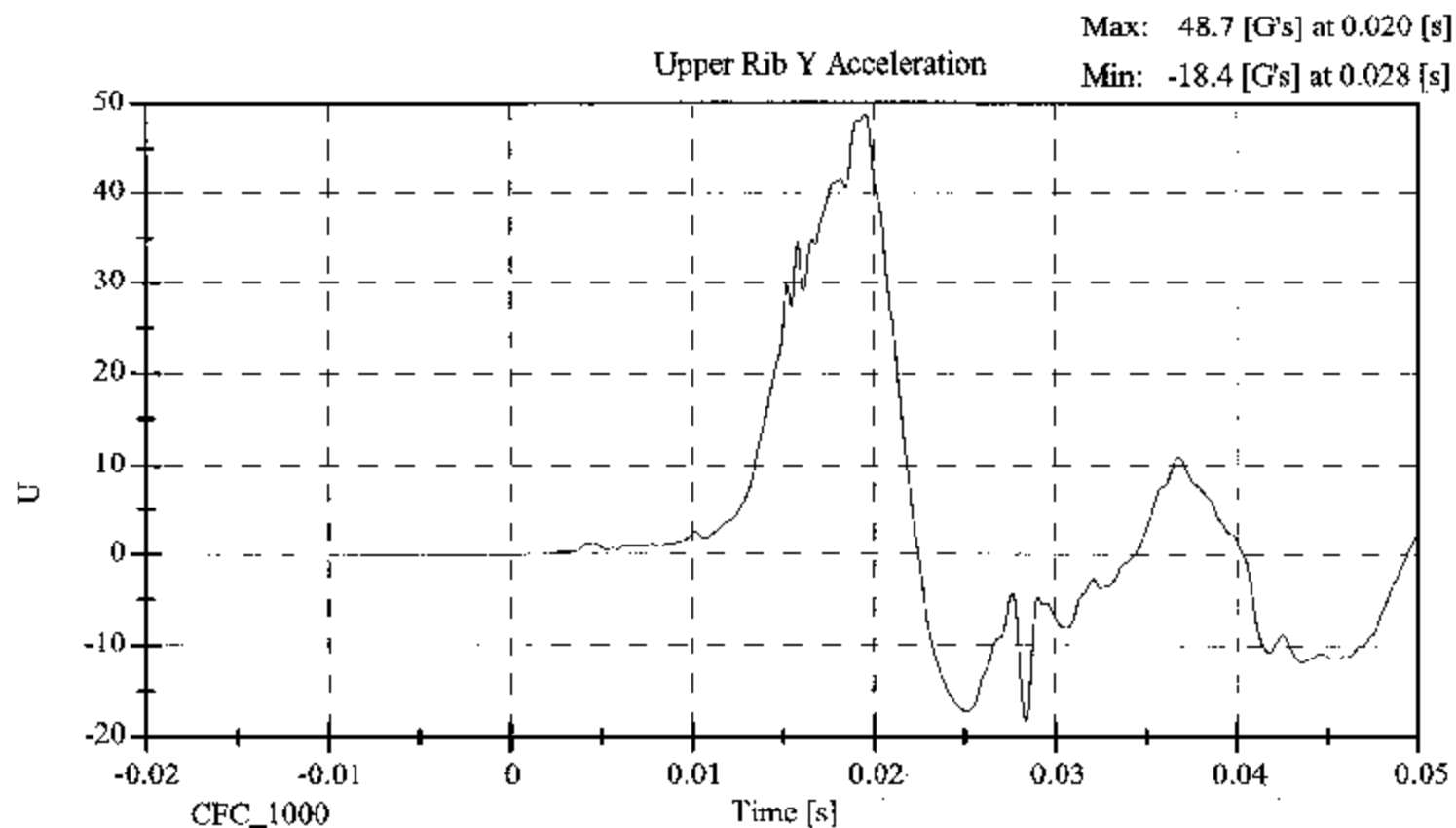
**LATERAL THORAX IMPACT TEST
PRE-TEST**

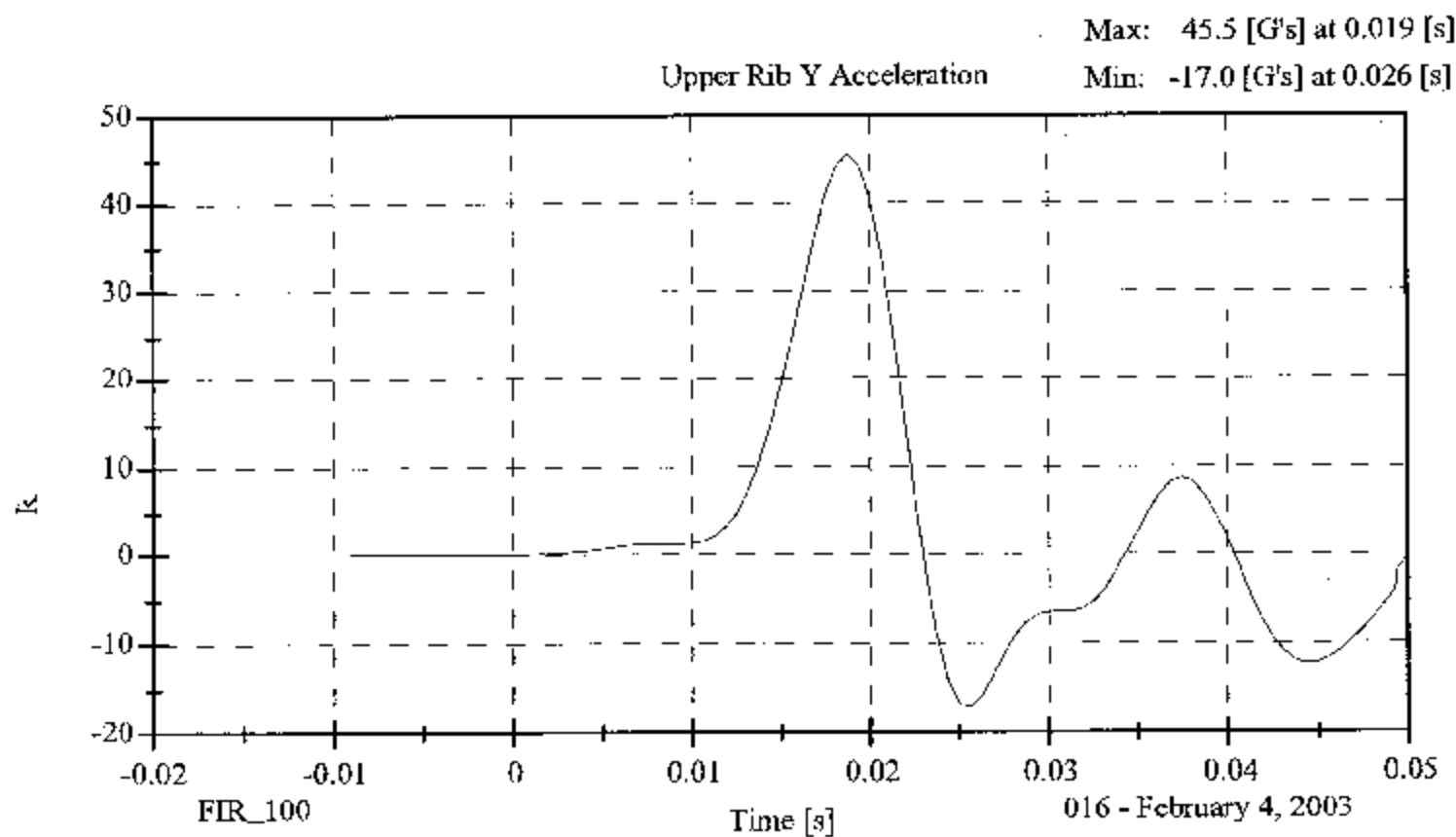
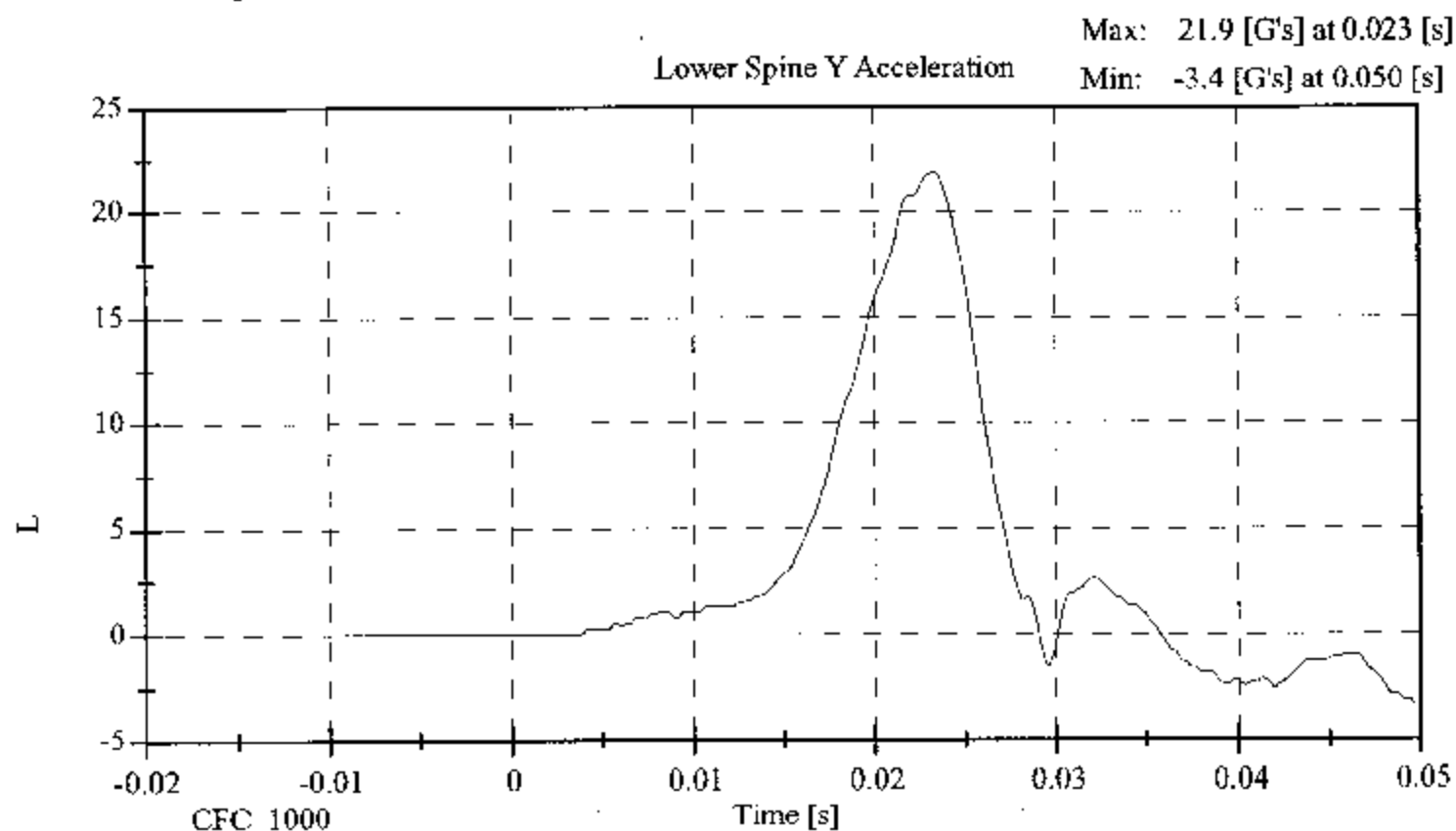
CONFIGURED FOR LEFT SIDE IMPACT

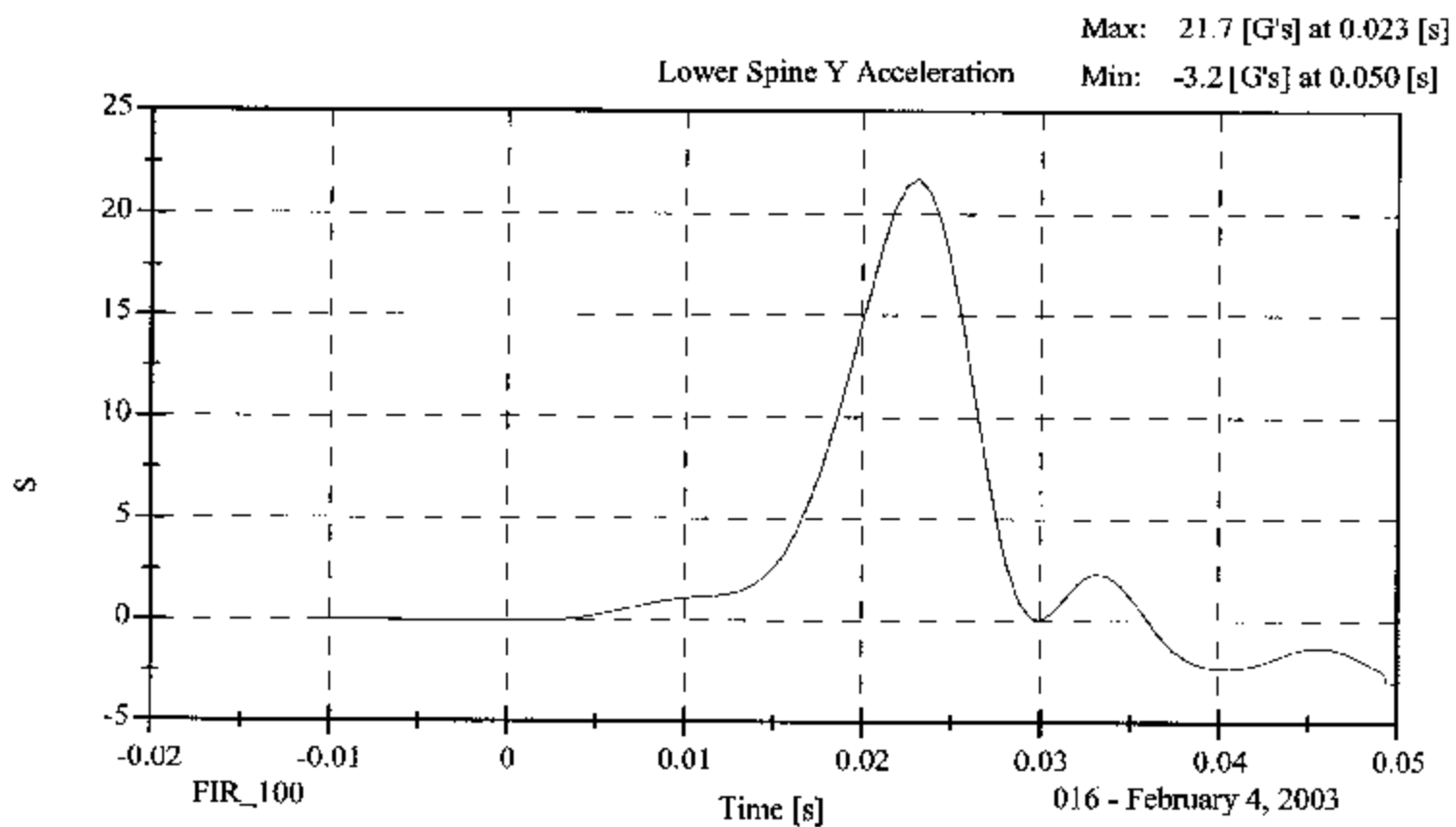
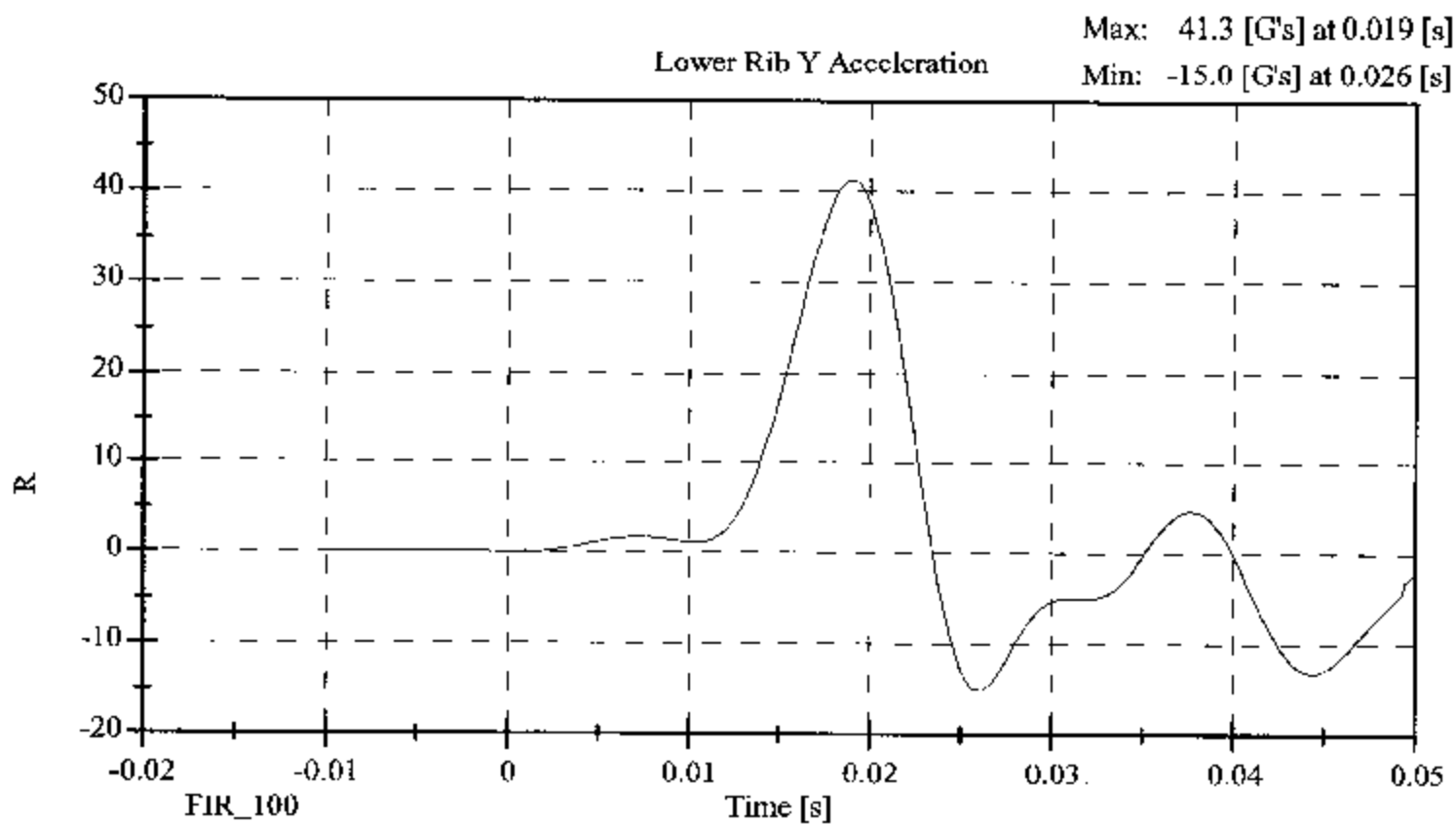
SID Serial No.: 016 Sequential Test Number: 1
Date: February 4, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	40.00
PROBE SPEED (m/s)	4.27 - 4.33	4.32
UPPER RIB (g's)	37 - 46	45.54
LOWER RIB (g's)	37 - 46	41.25
LOWER SPINE (g's)	15 - 22	21.75

REMARKS: None





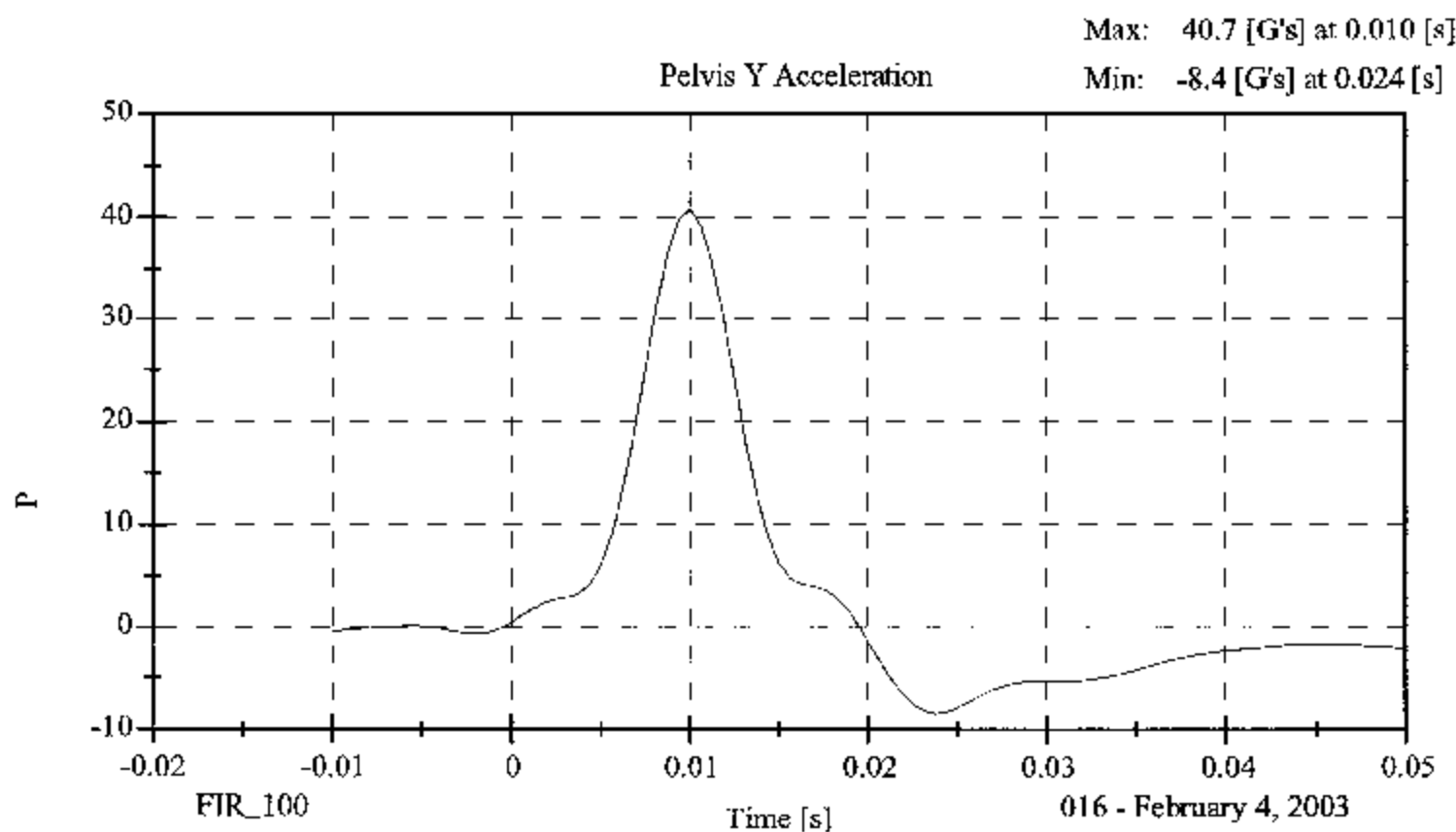
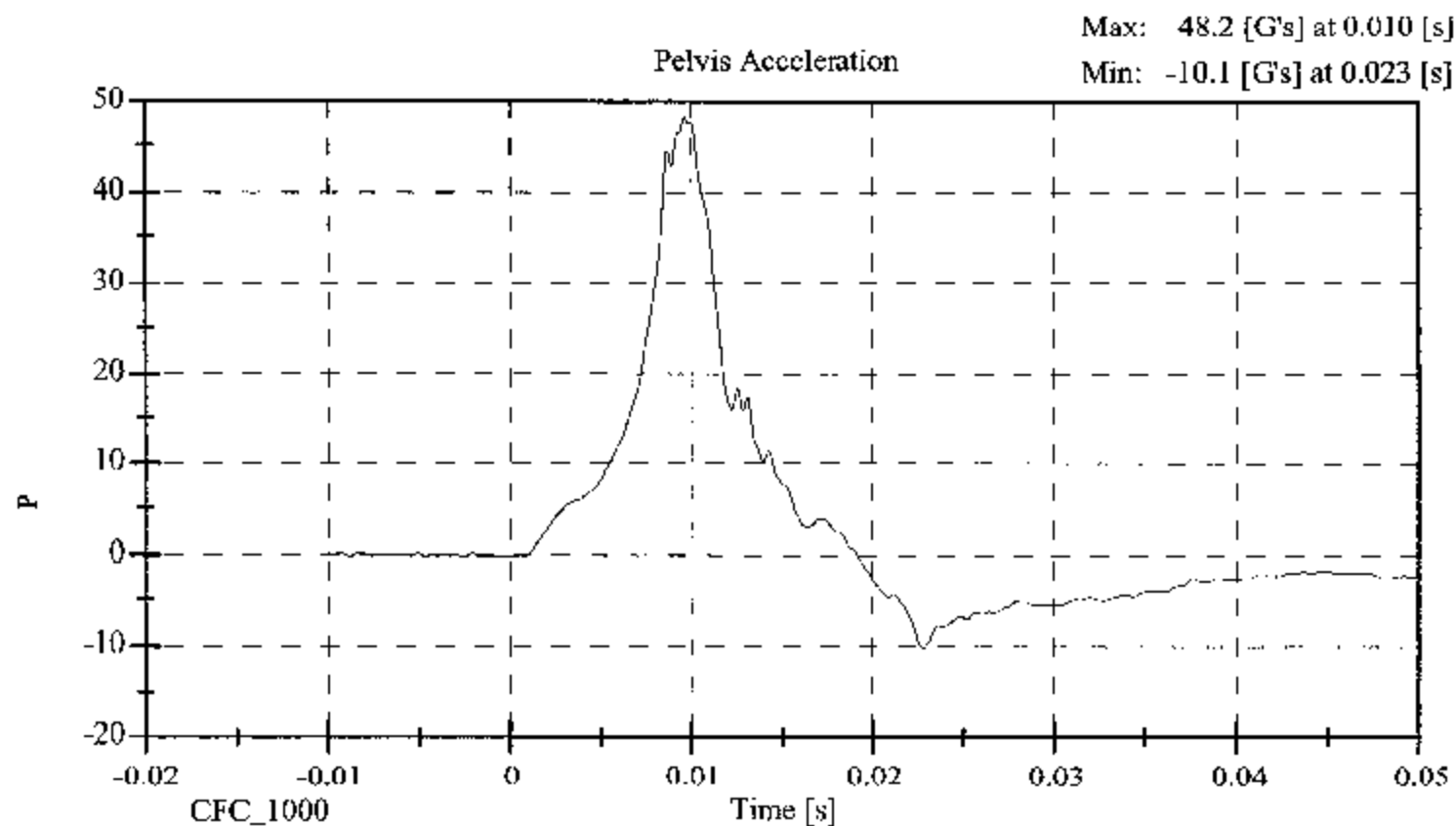


**LATERAL PELVIS IMPACT TEST
PRE-TEST
CONFIGURED FOR LEFT SIDE IMPACT**

SID Serial No.: 016 Sequential Test Number: 1
Date: February 4, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	40.00
PROBE SPEED (m/s)	4.27 - 4.33	4.28
PELVIS ACCELERATION (g's)	40 - 60	40.73

REMARKS: None



HEAD DROP TEST
PRE-TEST
(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
Date: January 29, 2003 Laboratory Technician: B. Swiecicki

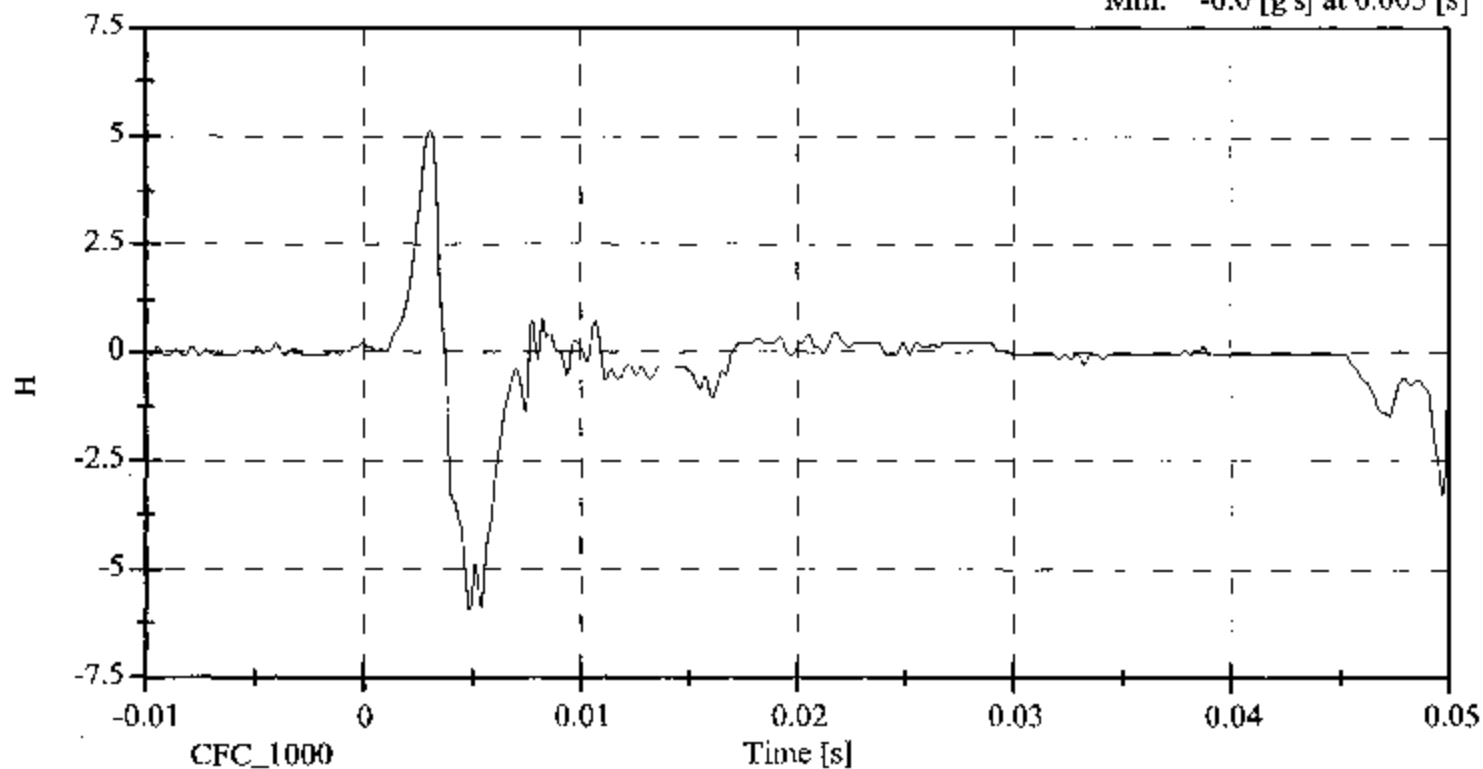
TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	20.6 - 22.2	21.1
RELATIVE HUMIDITY (%)	10 - 70	34.00
PEAK RESULTANT ACCELERATION (Gs)	120 - 150	149.05
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 15	5.13
CURVE PERCENT NONMODAL (%)	< 15	6.23

REMARKS: None

Head X Acceleration

Max: 5.1 [g's] at 0.003 [s]

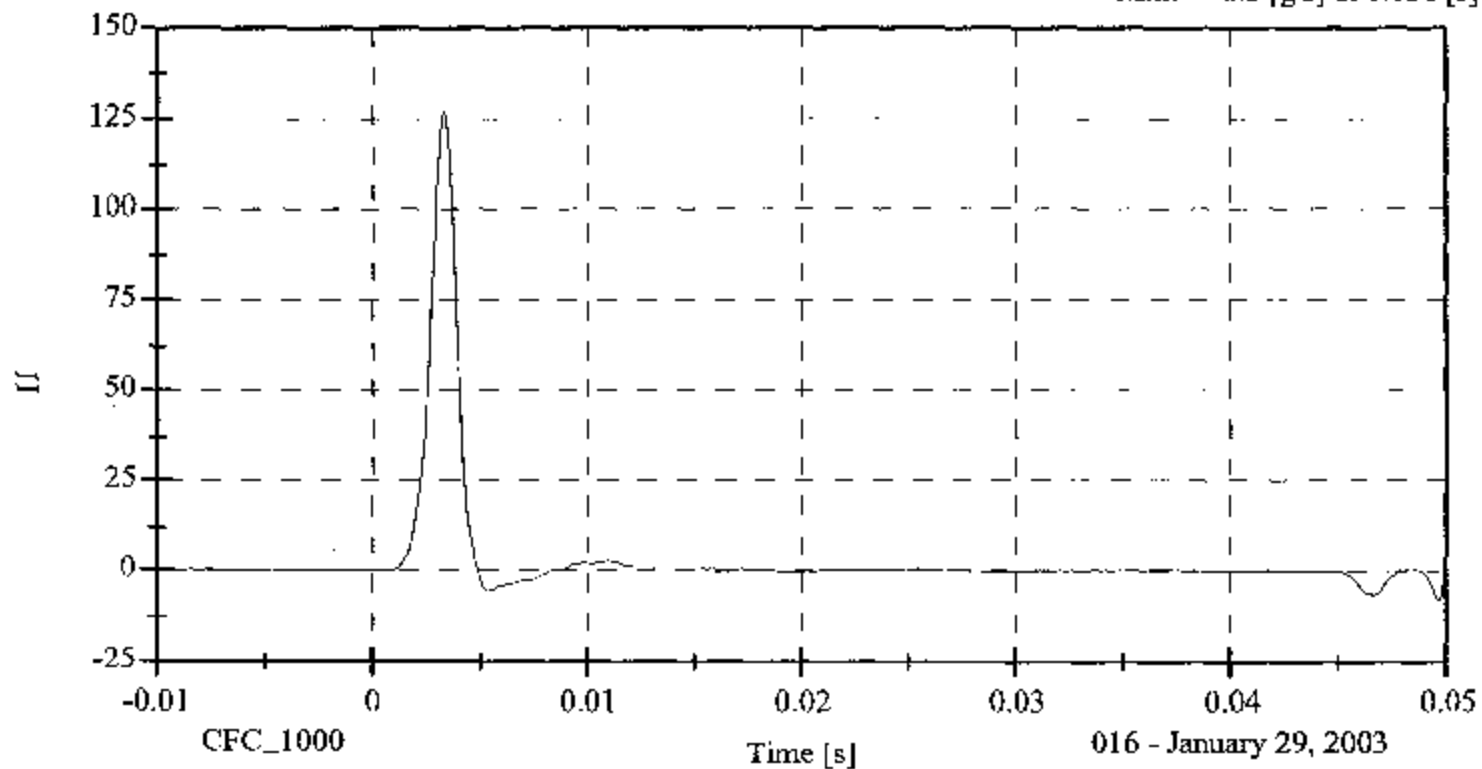
Min: -6.0 [g's] at 0.005 [s]



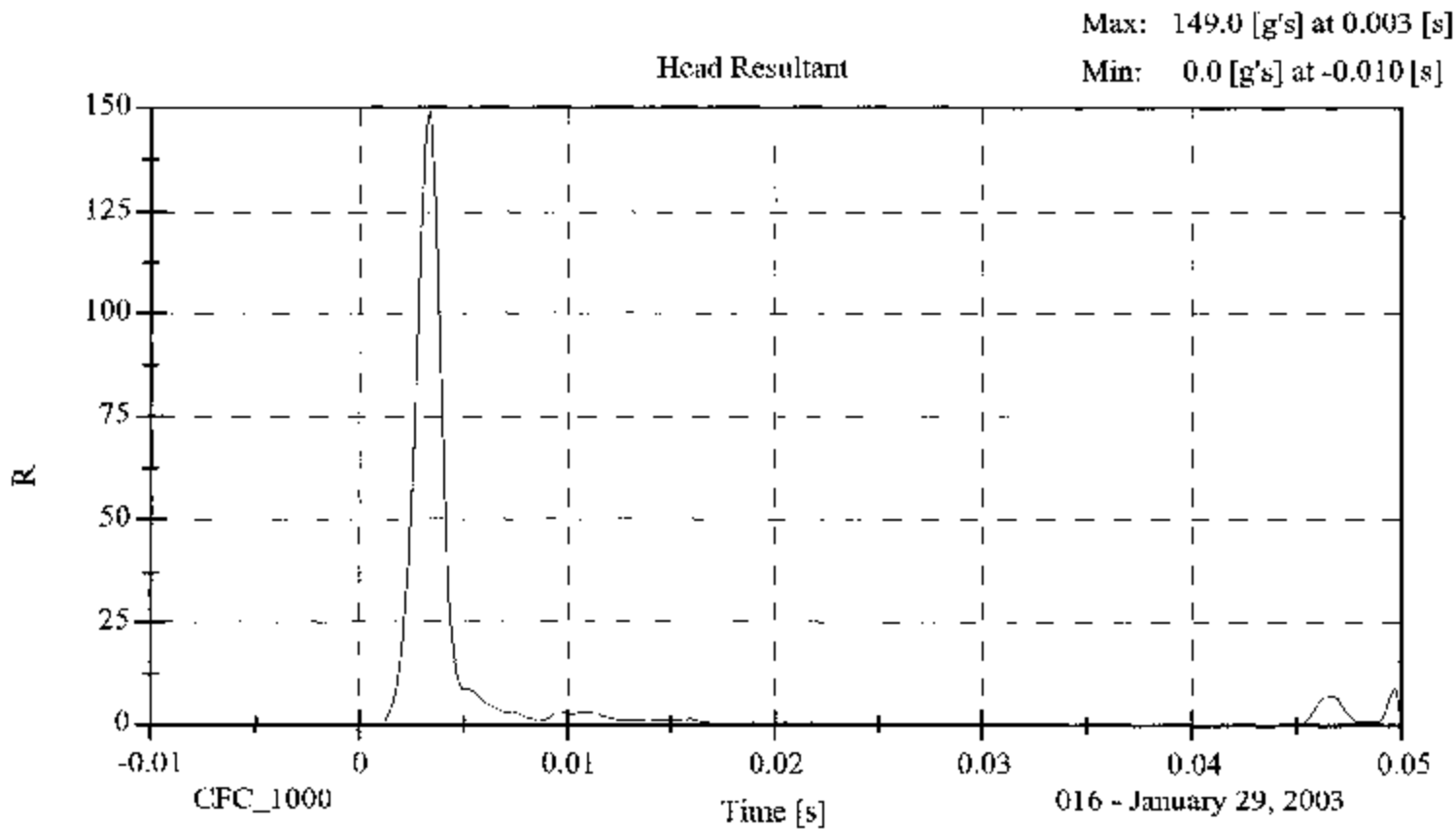
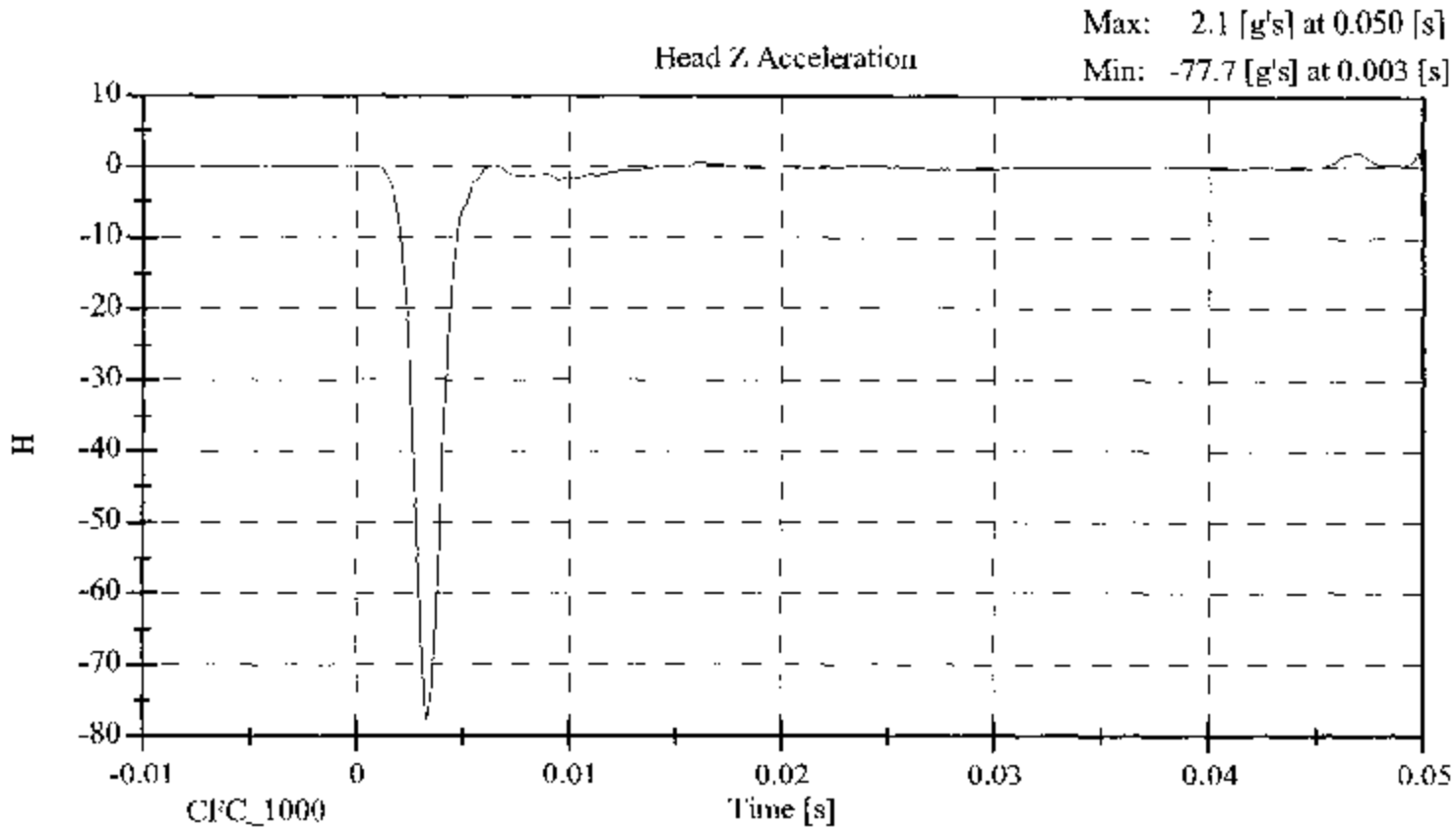
Head Y Acceleration

Max: 127.1 [g's] at 0.003 [s]

Min: -8.5 [g's] at 0.050 [s]



016 - January 29, 2003



**ABDOMINAL COMPRESSION TEST
PRE-TEST**

(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
Date: February 4, 2003 Laboratory Technician: B. Swicicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	40.0
FORCE @ 13 mm (N)	104 - 162	109.0
FORCE @ 19 mm (N)	163 - 221	177.9
FORCE @ 25 mm (N)	222 - 280	253.5
FORCE @ 33 mm (N)	325 - 391	369.2

REMARKS: None

Dummy S/N

016

W/A

Date

2-4-03

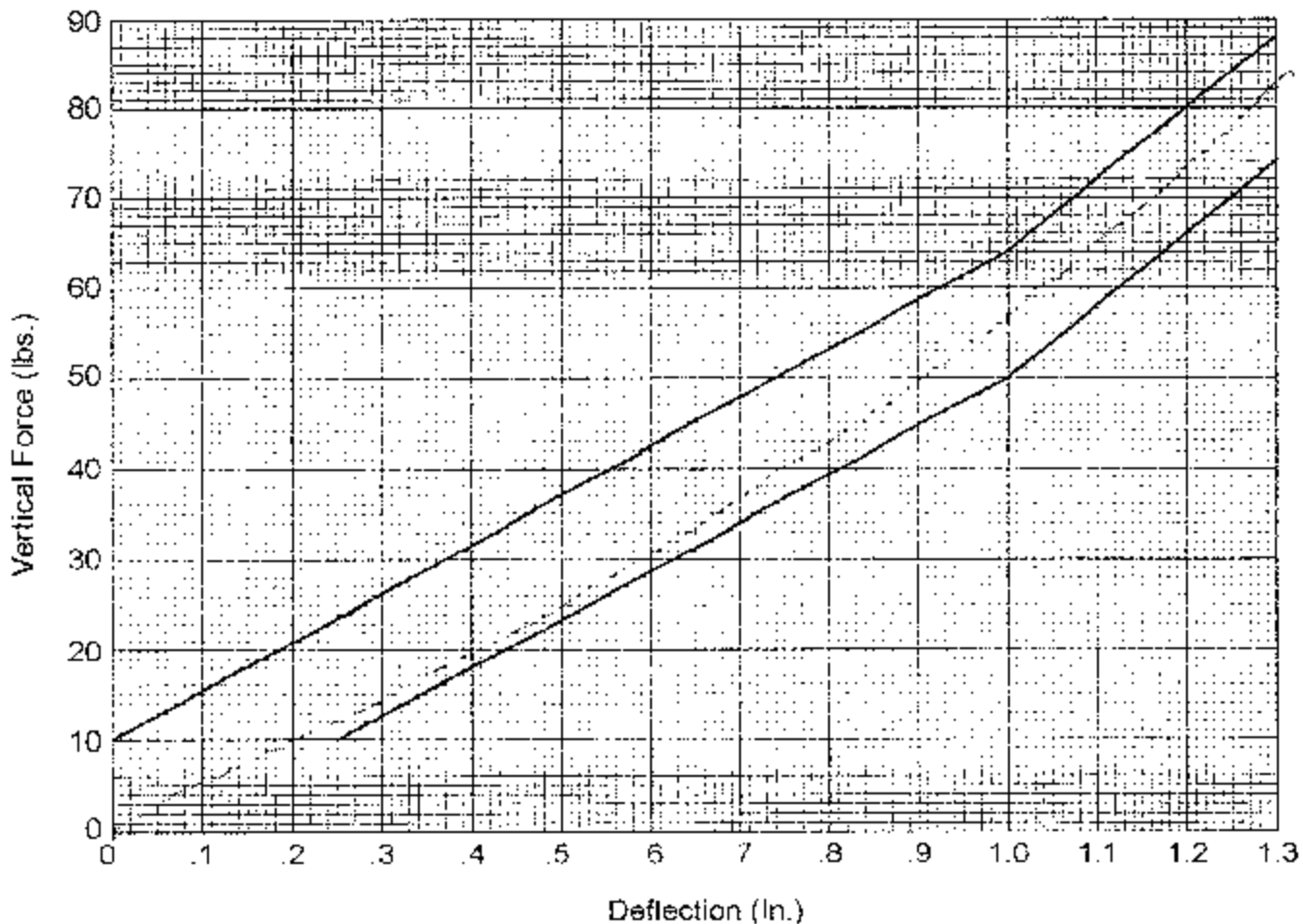
Performed By

Temp.

70°

Humidity

40%



Hybrid II
Abdomen Static Press

LUMBAR FLEXION TEST
PRE-TEST
(Test not required for SID certification)

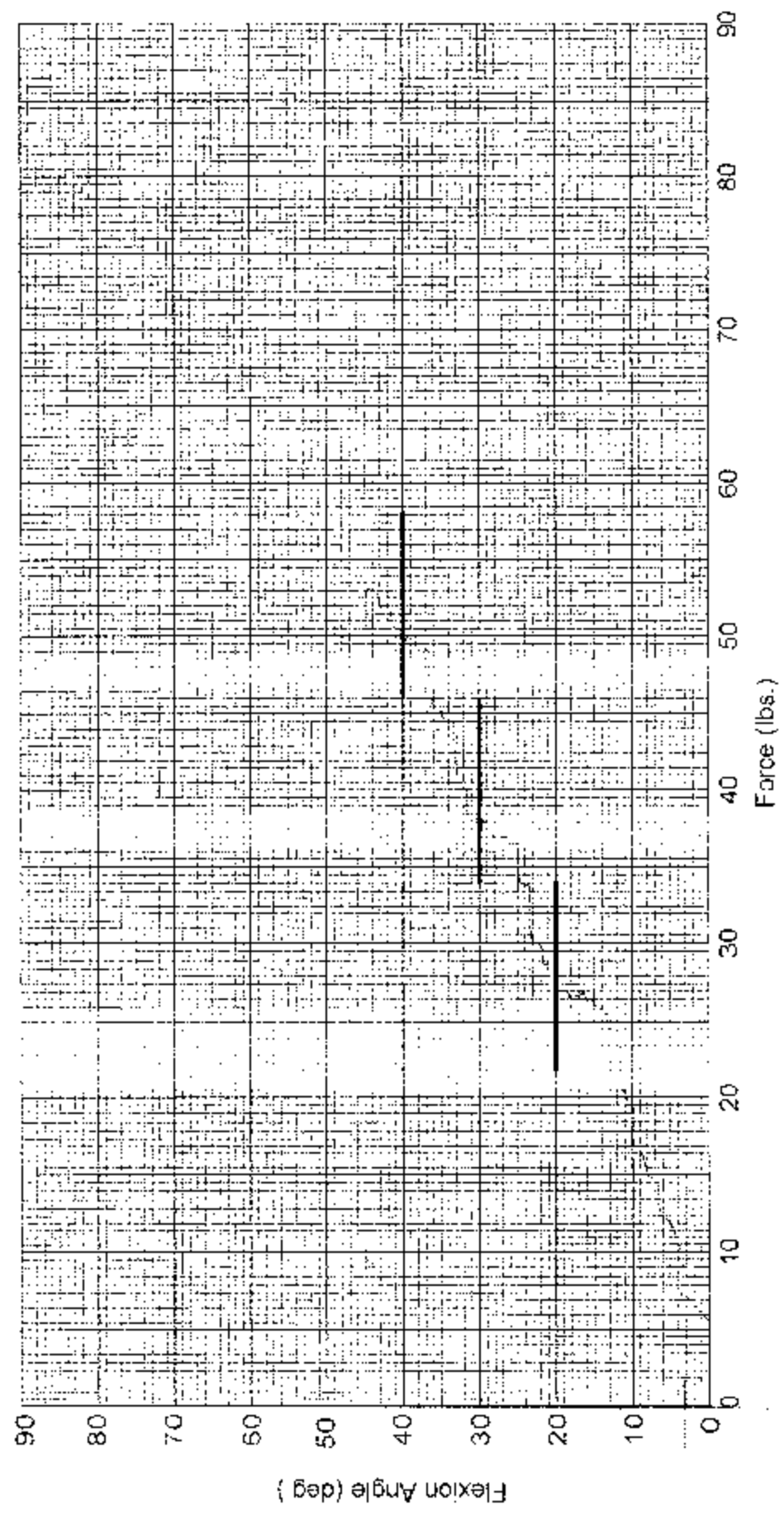
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
Date: February 4, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	40.0
FORCE @ 0° (N)	0 - 26.7	0
FORCE @ 20° (N)	97.8 - 151.2	120.1
FORCE @ 30° (N)	151.2 - 204.6	169.0
FORCE @ 40° (N)	204.6 - 258	222.4
RETURN ANGLE	12° max.	4

REMARKS: None

Dummy S/N --- 016 ---
W/A ---
Date 2-4-03
Performed By [Signature]
Temp. 70°
Humidity 40%



Hybrid II Lumbar Spine Flexion Test

PRE-TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
 Date: February 4, 2003 Laboratory Technician: B. Swiecicki

PART	ITEMS CHECKED	COMMENTS
SKIN	VISUAL INSPECTION	OK
HEAD	VISUAL, BALLAST, ACCELEROMETER MOUNT	OK
NECK	VISUAL, CABLE TORQUE	OK
SPINE BOX	VISUAL, BALLAST, WELDMENT, ACCELEROMETER MOUNT	OK
RIB CAGE	VISUAL, MEASURE, STIFFENERS	OK
STERNUM	VISUAL	OK
LUMBAR SPINE	VISUAL	OK
ABDOMEN	VISUAL	OK
PELVIS	VISUAL, PALPATE, ACCELEROMETER MOUNT	OK
UPPER LEGS	VISUAL	OK
KNEES	VISUAL, STOPS, INSERTS	OK
LOWER LEGS	VISUAL, RANGE OF MOTION	OK
ANKLES	VISUAL, RANGE OF MOTION	OK
FEET	VISUAL, RANGE OF MOTION	OK
JOINTS	1 TO 2 g RANGE	OK
OTHER	NONE	

REMARKS: None

CALIBRATION TEST RESULTS

POST TEST

STD NO.: 015

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
Date: February 28, 2003 Laboratory Technician: B. Swieczicki

TEST	COMMENTS
EXTERNAL DIMENSIONS	Passed all requirements.
LATERAL THORAX IMPACT TEST	Passed all requirements.
LATERAL PELVIS IMPACT TEST	Passed all requirements.
HEAD DROP TEST*	Passed all requirements.
ABDOMINAL COMPRESSION TEST*	Passed all requirements.
LUMBAR FLEXION TEST*	Passed all requirements.

* Test not required for SID certification.

REMARKS: None

**EXTERNAL DIMENSIONS
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: <u>015</u>	Sequential Test Number: <u>1</u>	
Date: <u>February 28, 2003</u>	Laboratory Technician: <u>B. Swiecicki</u>	

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	902
RH- Rib Height (mm)	502 - 520	510
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	236
KH- Knee Pivot from Back Line (mm)	511 - 526	521
KV- Knee Pivot to Floor (mm)	490 - 505	493
HW- Hip Width (mm)	356 - 391	376

REMARKS: None

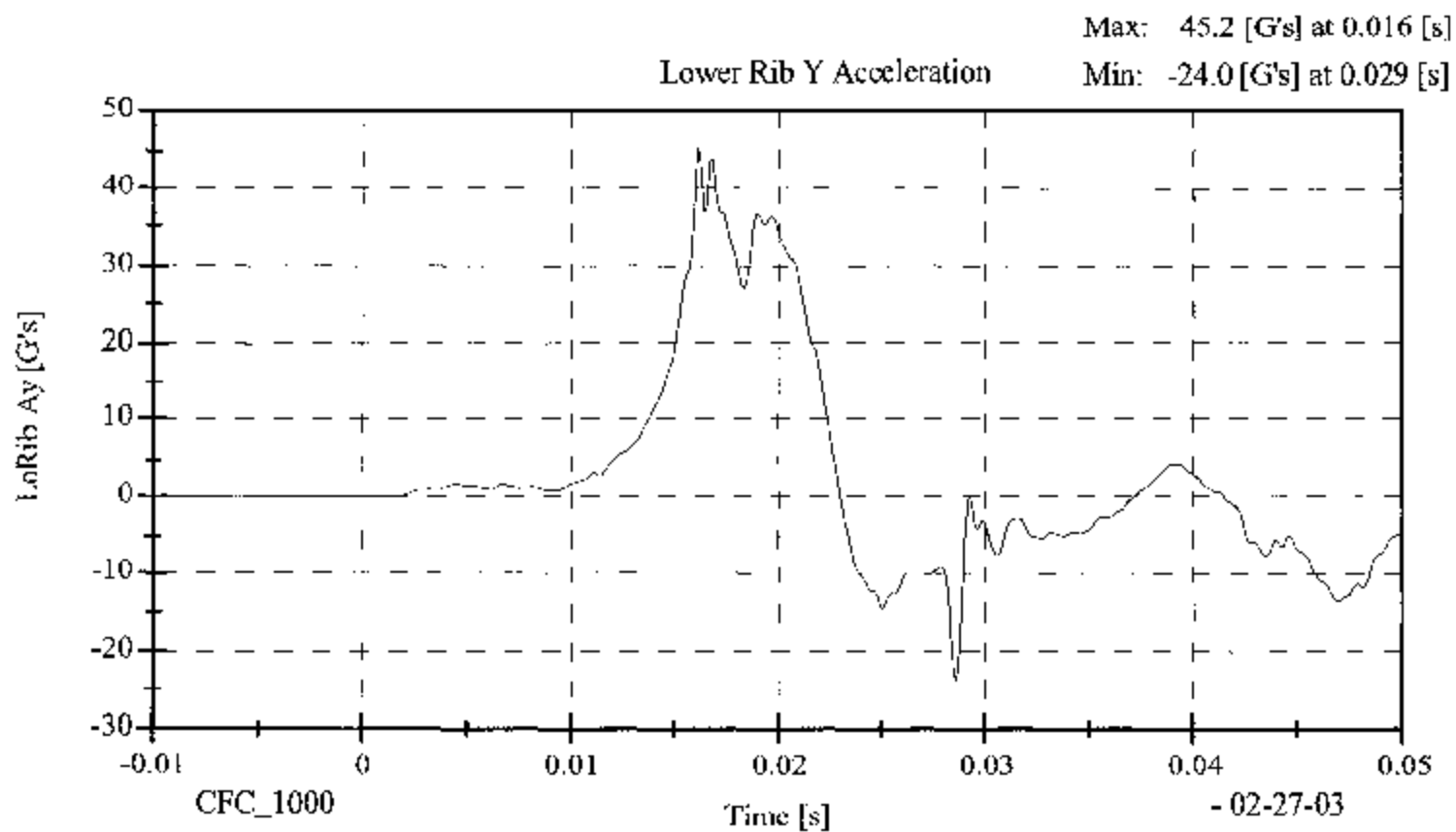
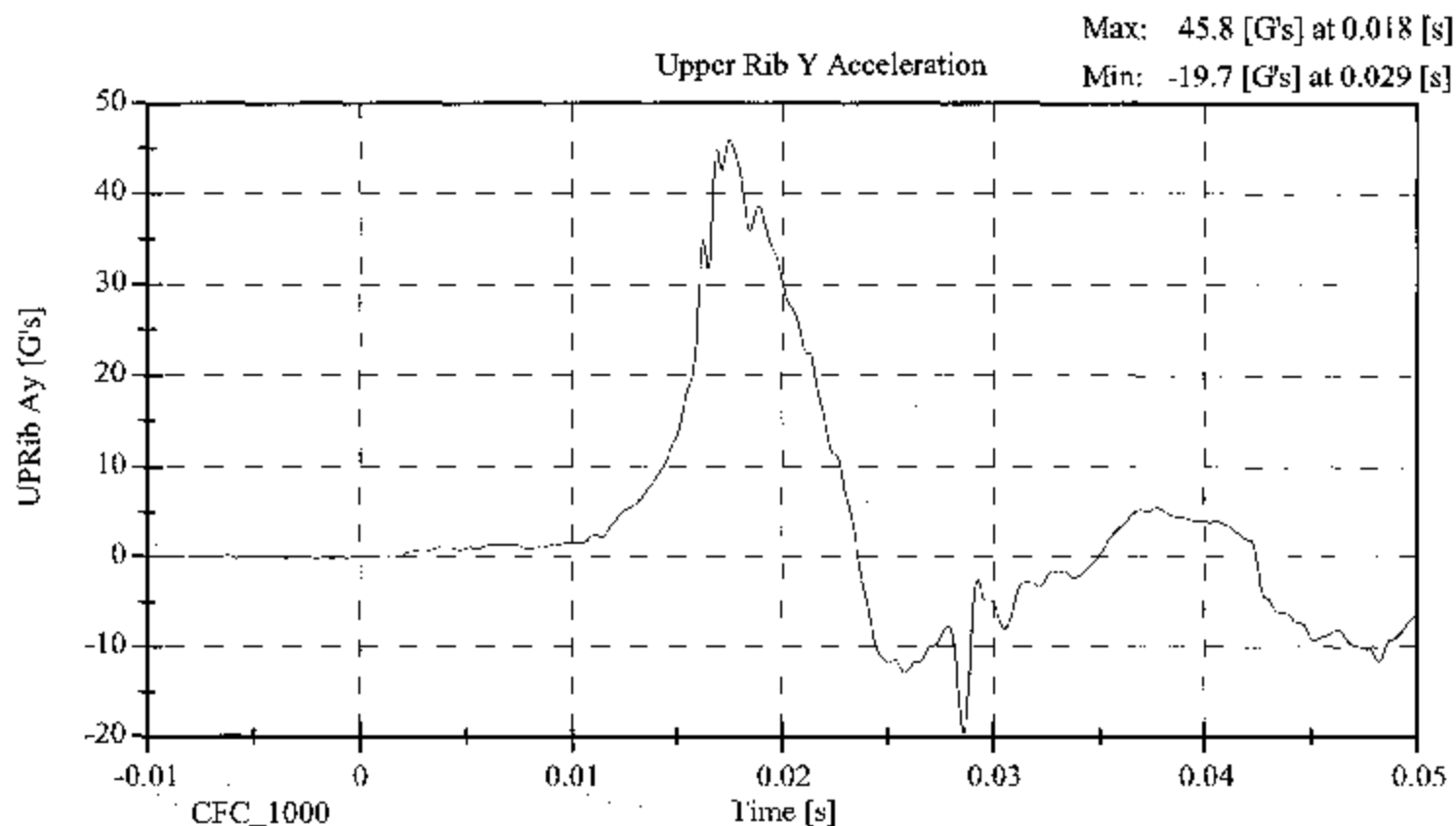
**LATERAL THORAX IMPACT TEST
POST TEST**

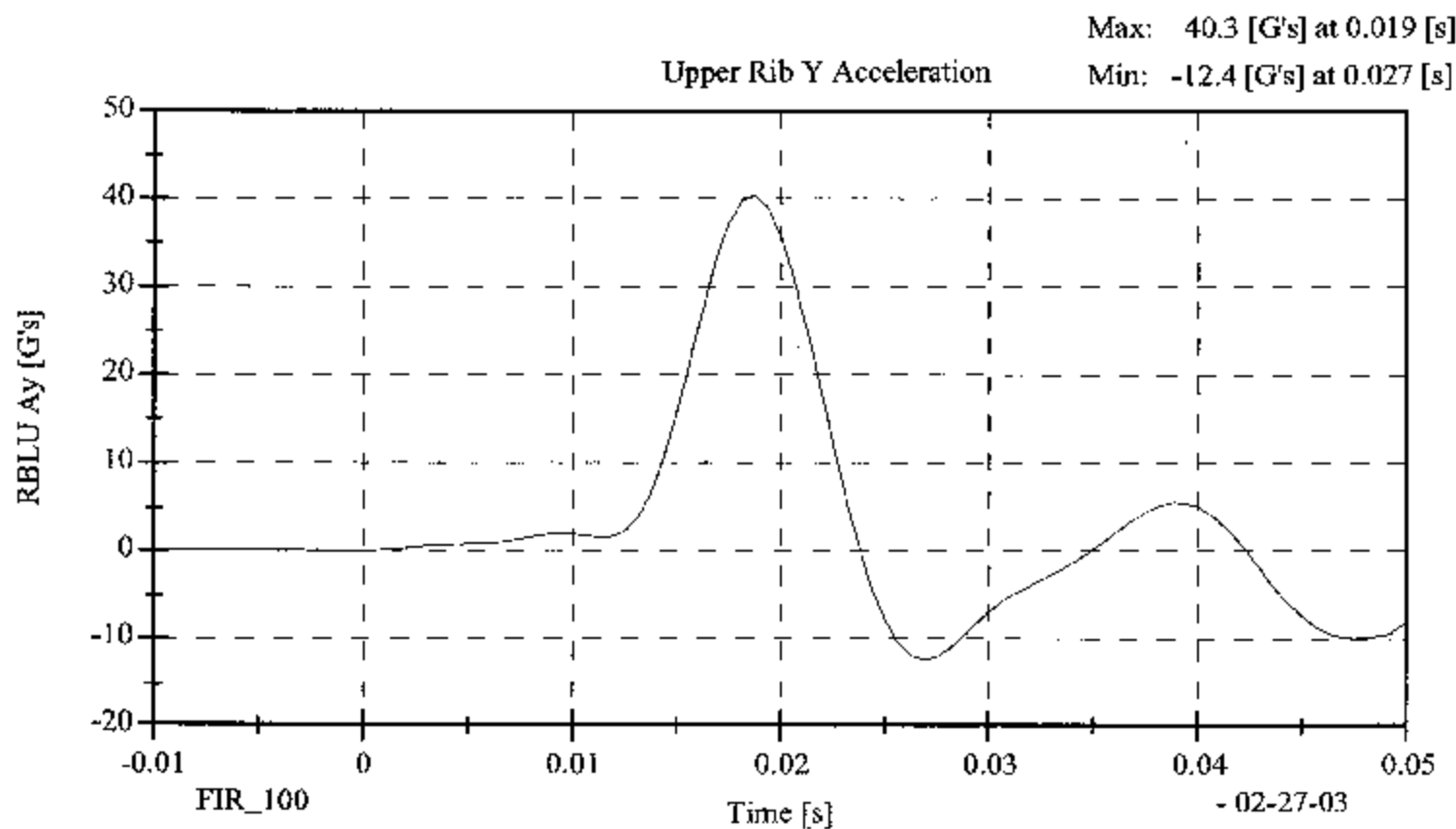
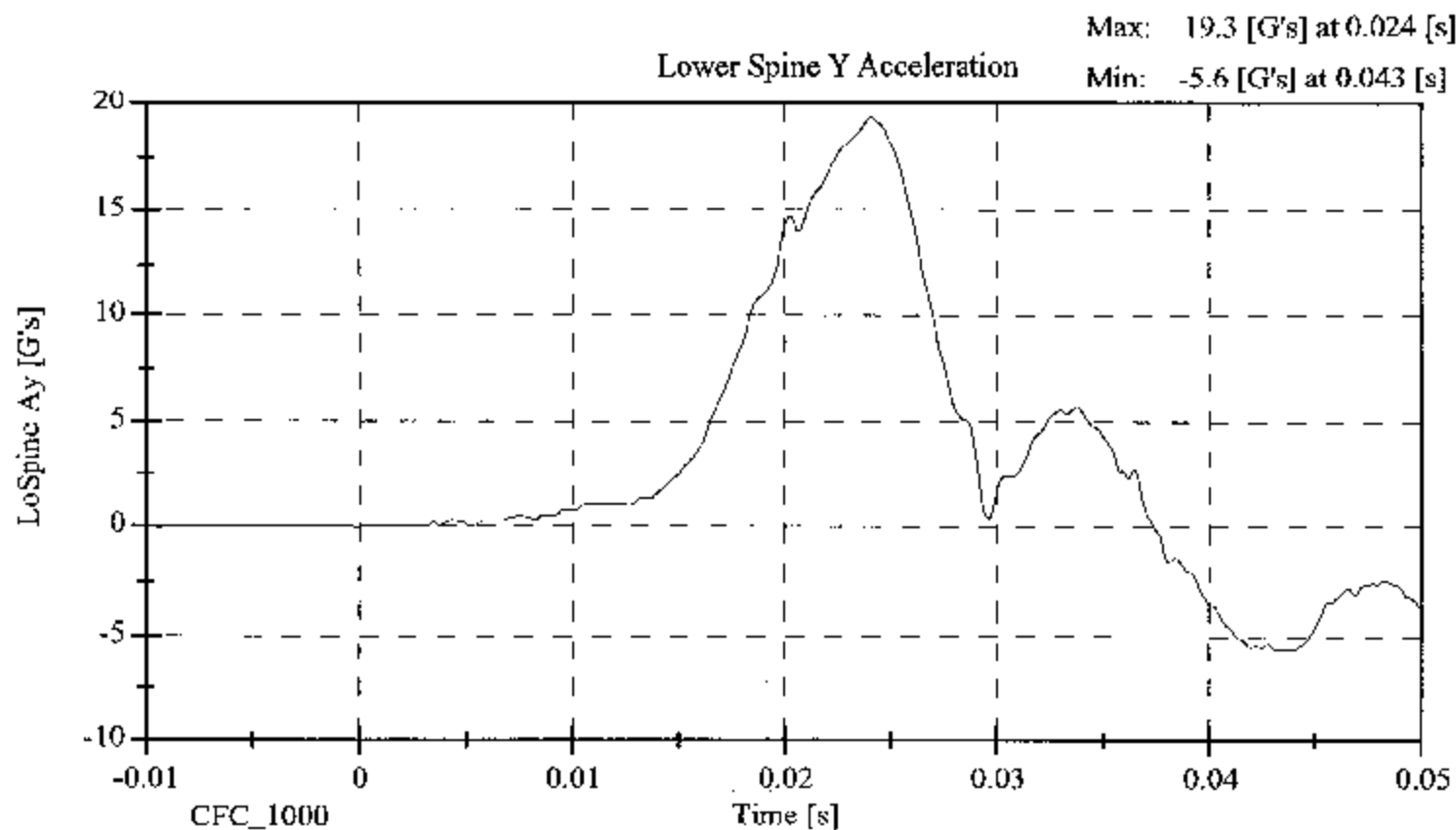
CONFIGURED FOR LEFT SIDE IMPACT

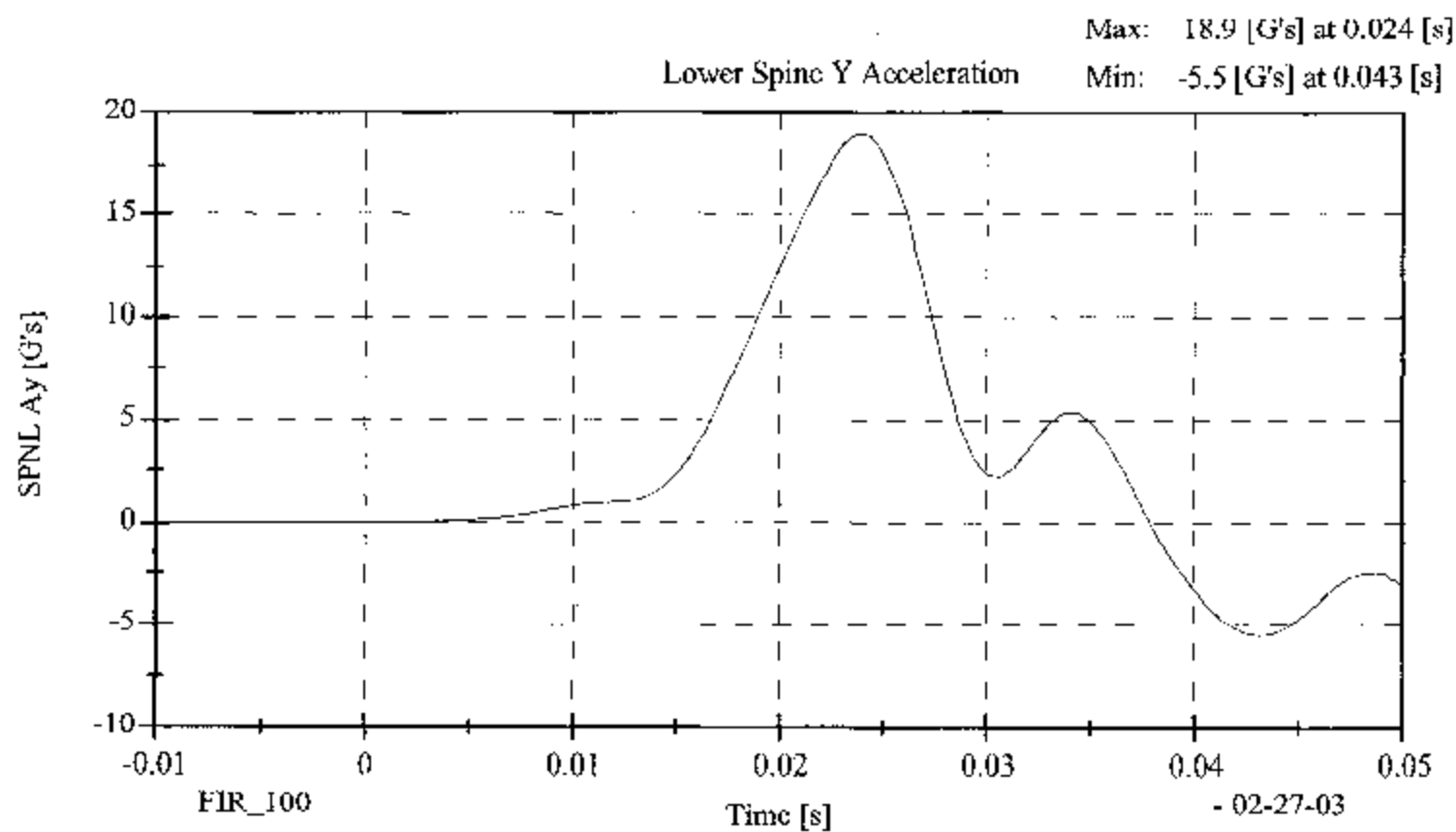
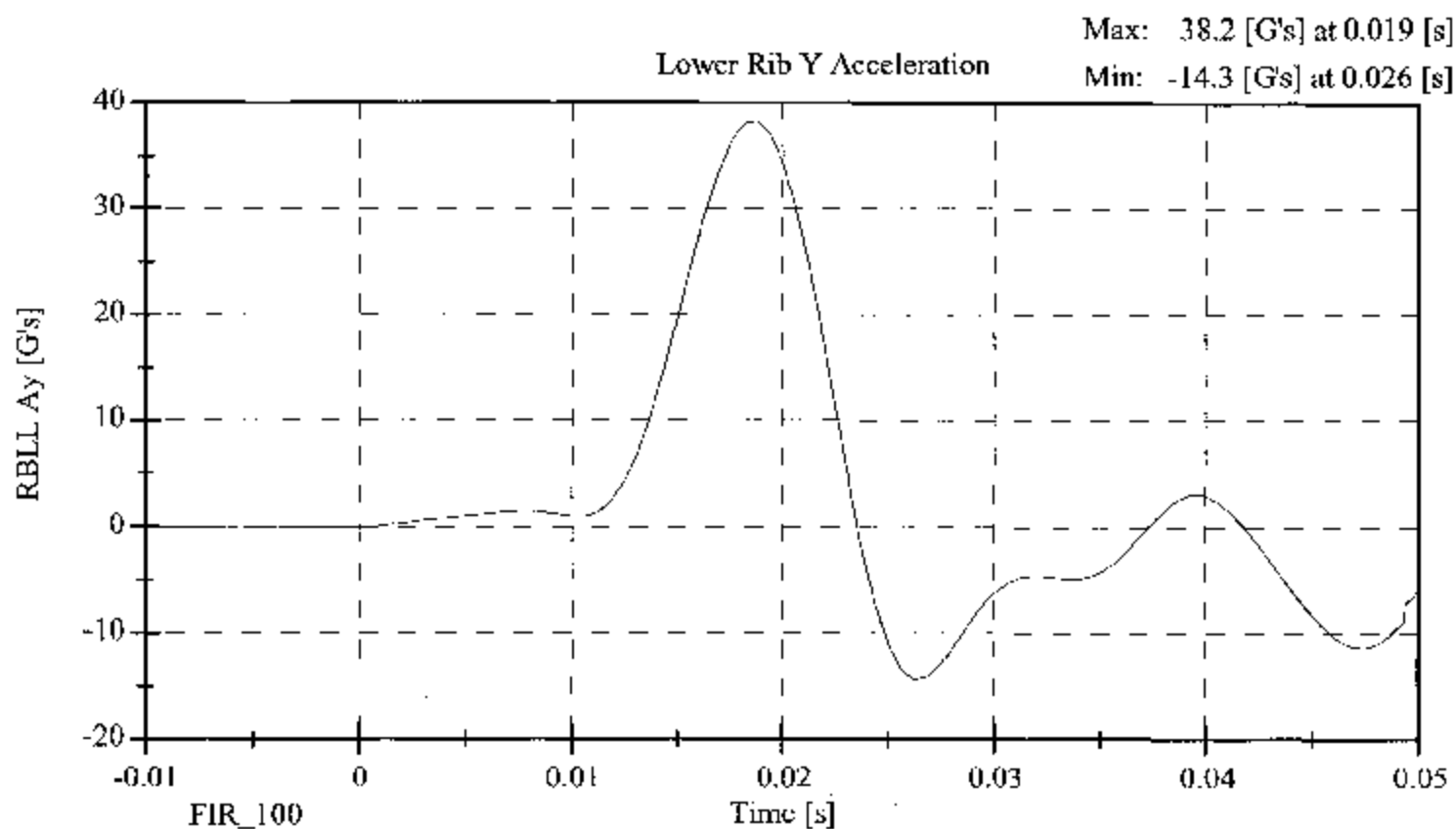
SID Serial No.: 015 Sequential Test Number: 1
Date: February 27, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	33
PROBE SPEED (m/s)	4.27 - 4.33	4.30
UPPER RIB (g's)	37 - 46	40.32
LOWER RIB (g's)	37 - 46	38.23
LOWER SPINE (g's)	15 - 22	18.94

REMARKS: None







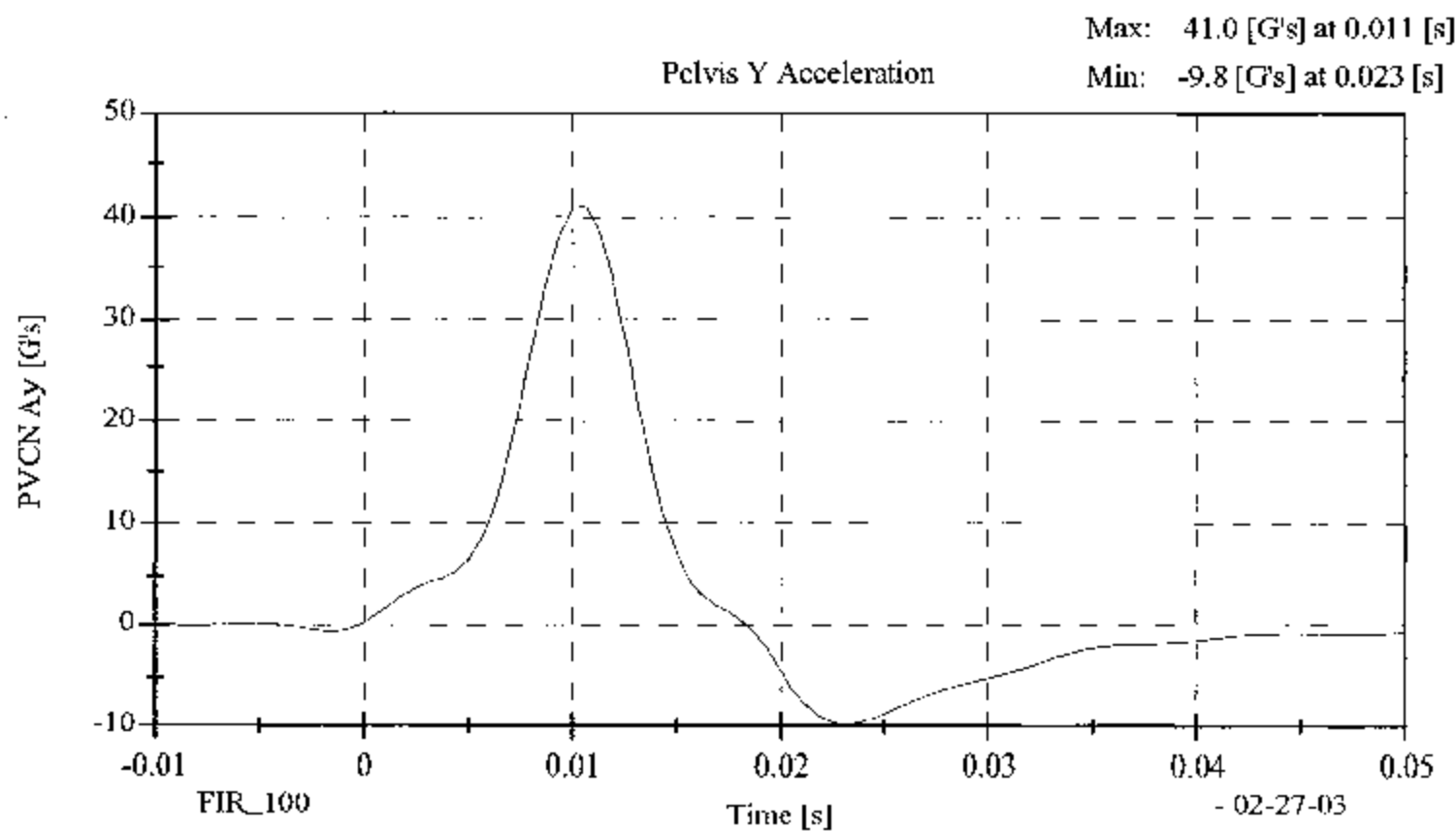
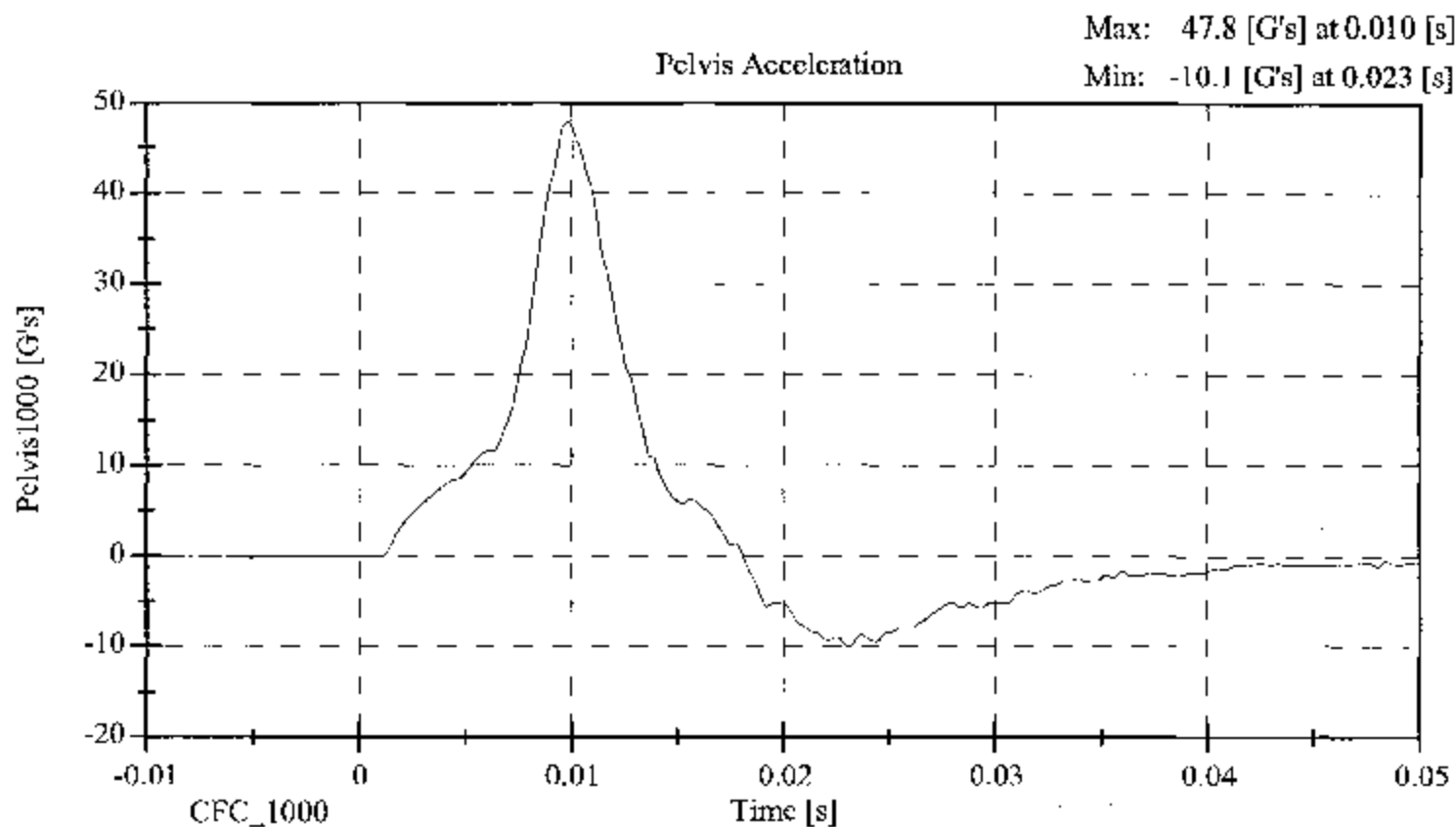
**LATERAL PELVIS IMPACT TEST
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
Date: February 27, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	33
PROBE SPEED (m/s)	4.27 - 4.33	4.28
PELVIS ACCELERATION (g's)	40 - 60	41.02

REMARKS: None



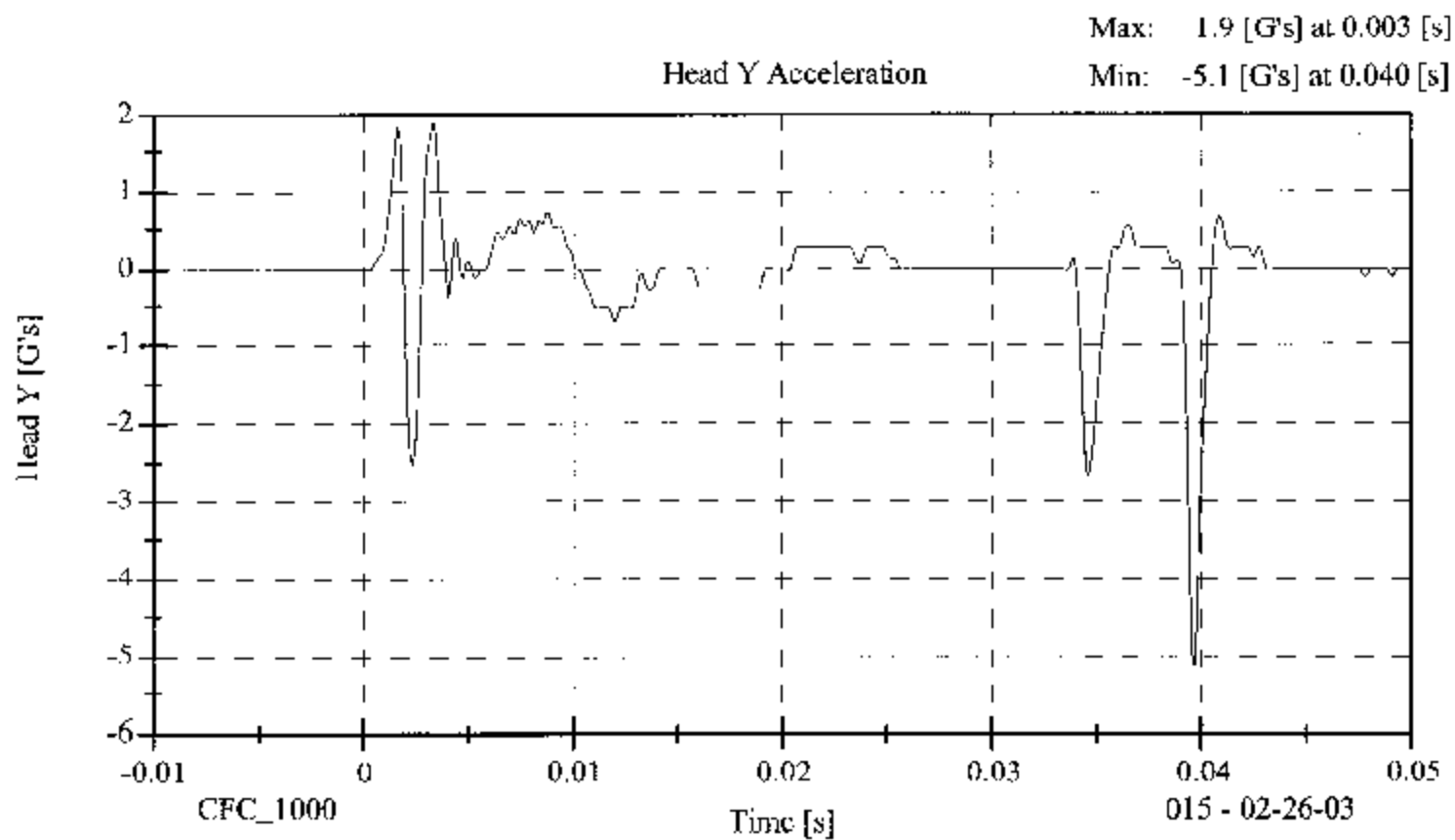
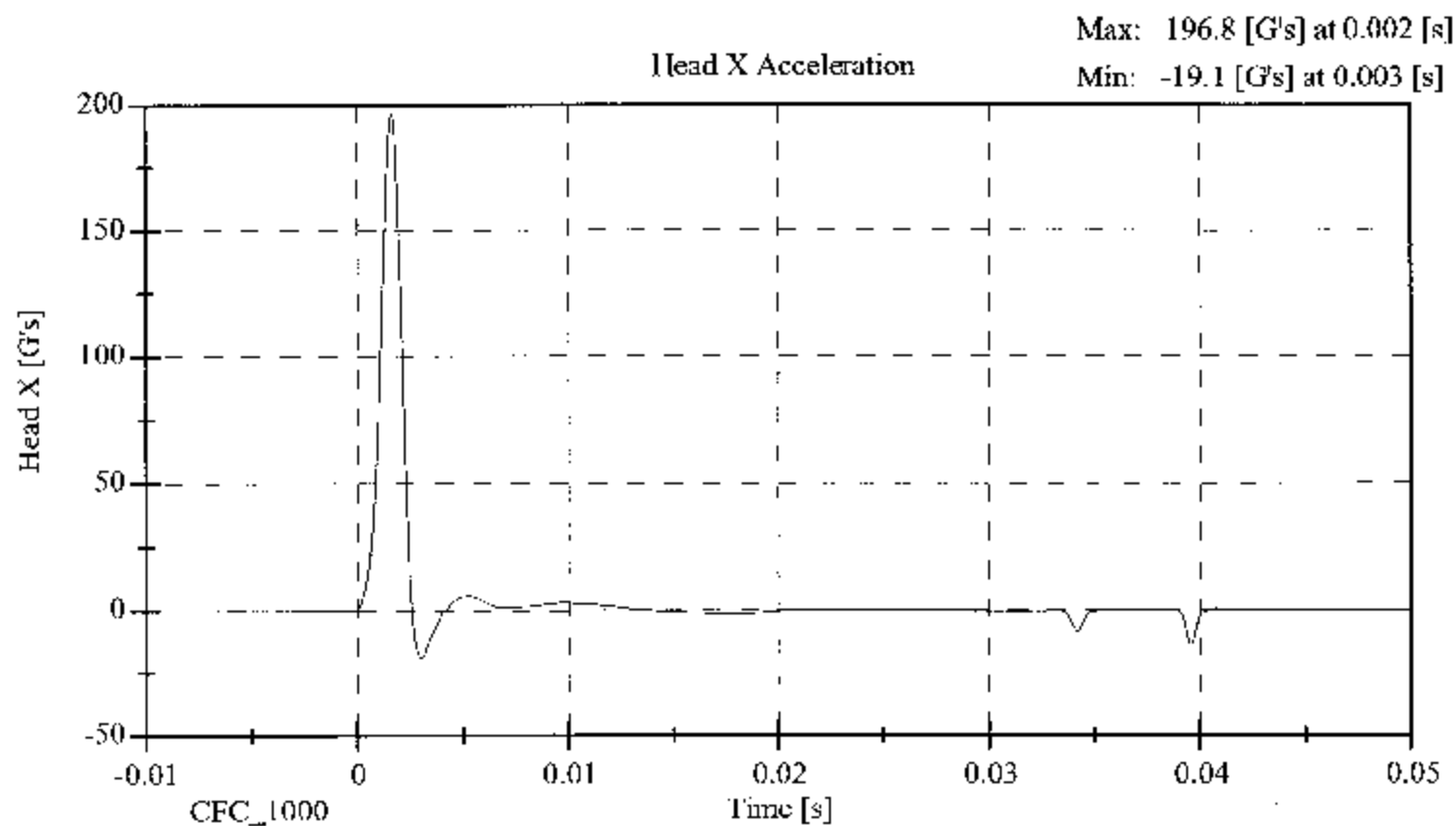
**HEAD DROP TEST
POST-TEST**
(Test not required for SID certification)

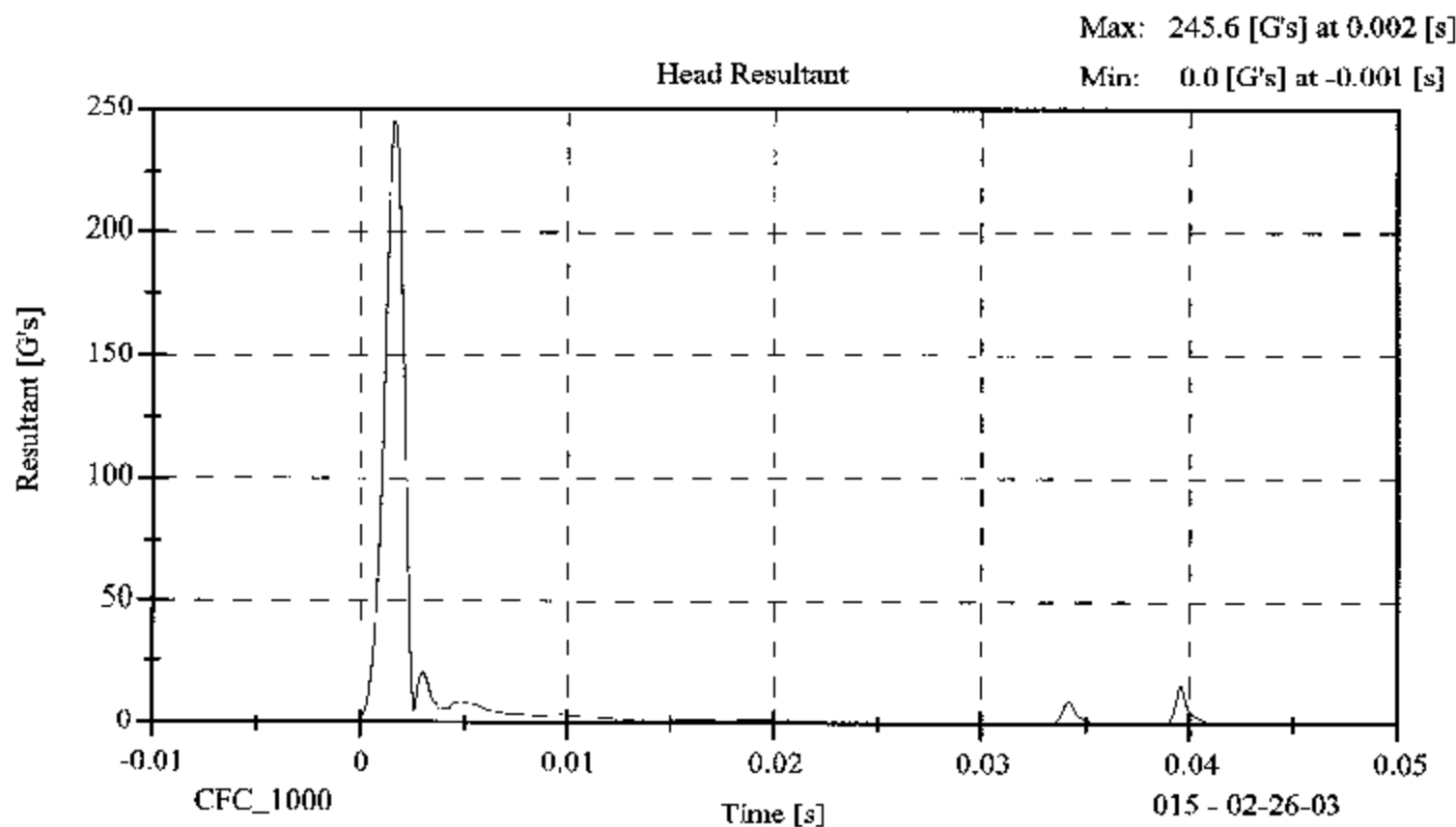
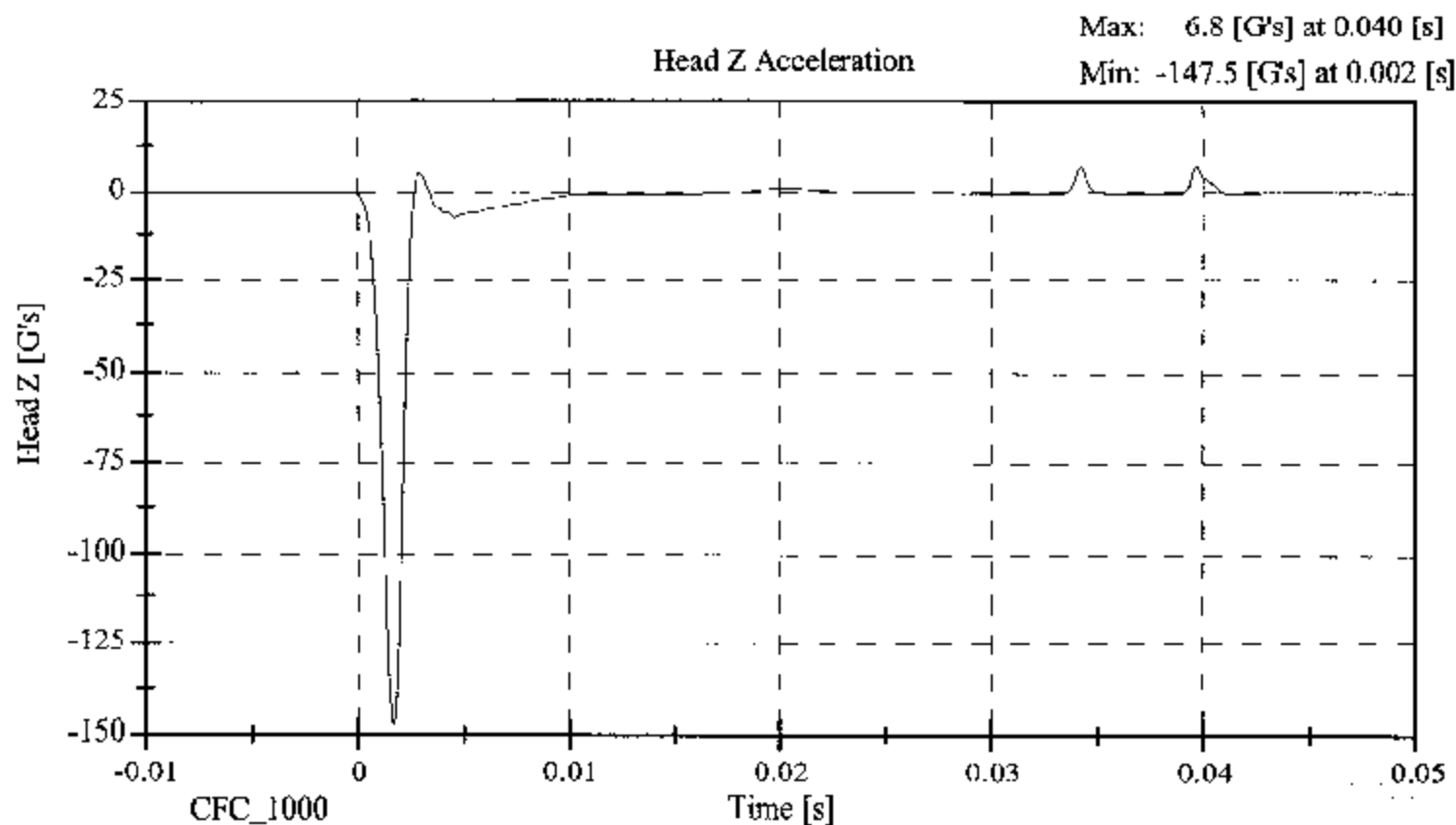
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
Date: February 26, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	20.6
RELATIVE HUMIDITY (%)	10 - 70	36
PEAK RESULTANT ACCELERATION (Gs)	210 - 260	245.57
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 10	5.11
UNIMODAL CRITERIA ABOVE 100 Gs (ms)	0.9 - 1.5	1.18

REMARKS: None





ABDOMINAL COMPRESSION TEST
POST TEST
(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.:	<u>015</u>	Sequential Test Number:	<u>1</u>
Date:	<u>February 28, 2003</u>	Laboratory Technician:	<u>B. Swiecicki</u>

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31
FORCE @ 13 mm (N)	104 - 162	116.5
FORCE @ 19 mm (N)	163 - 221	186.8
FORCE @ 25 mm (N)	222 - 280	270.9
FORCE @ 33 mm (N)	325 - 391	390

REMARKS: None

Dummy S/N 015

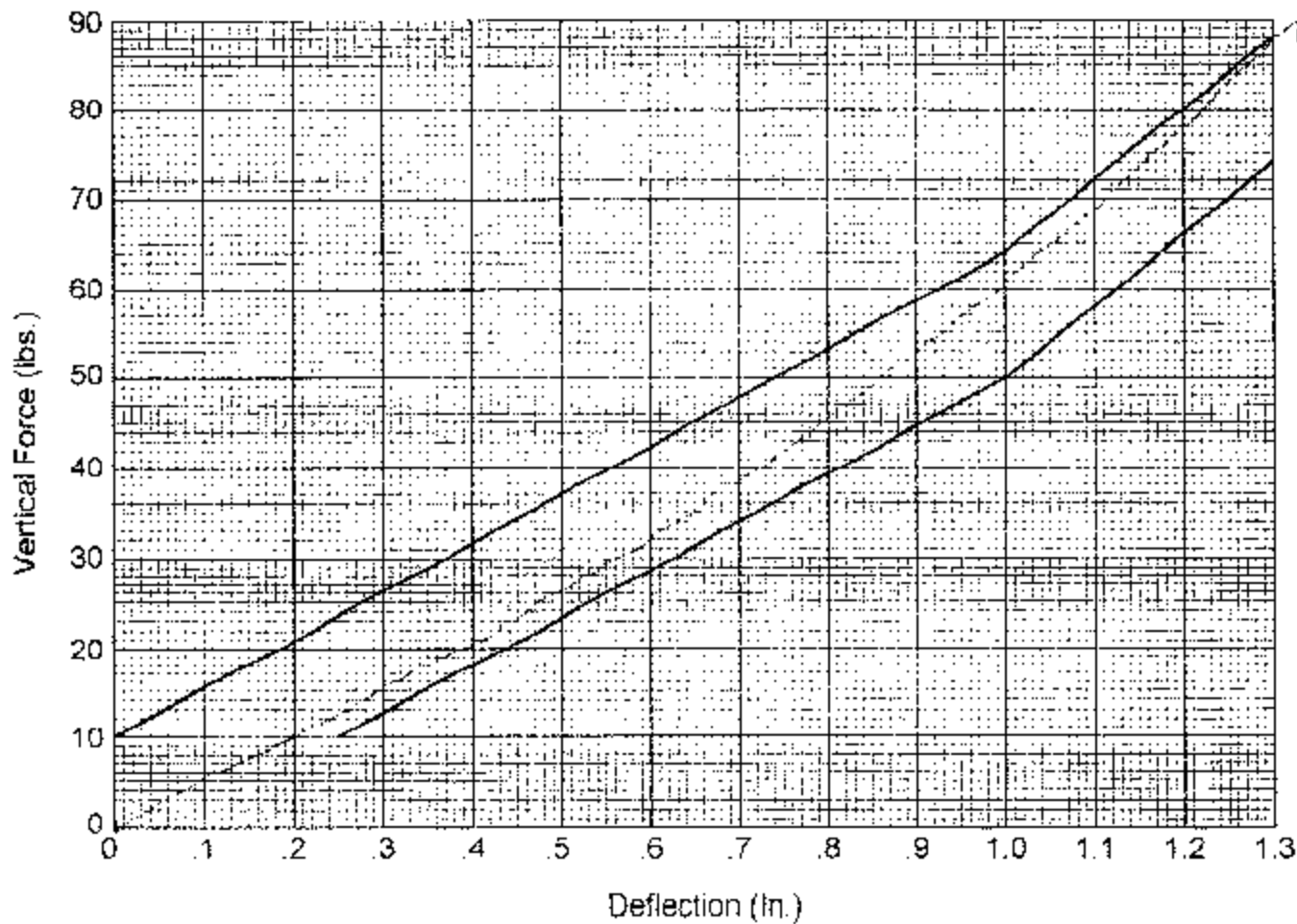
W/A _____

Date 2-28-03

Performed By [Signature]

Temp. 71

Humidity 31%



Hybrid II
Abdomen Static Press

LUMBAR FLEXION TEST
POST TEST
 (Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: <u>015</u>	Sequential Test Number: <u>1</u>	
Date: <u>February 28, 2003</u>	Laboratory Technician: <u>B. Swieczicki</u>	

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31
FORCE @ 0° (N)	0 - 26.7	0.0
FORCE @ 20° (N)	97.8 - 151.2	120.5
FORCE @ 30° (N)	151.2 - 204.6	176.6
FORCE @ 40° (N)	204.6 - 258	222.9
RETURN ANGLE	12° max.	3°

REMARKS: None

Dummy S/N

015

W/A

Date

2-28-03

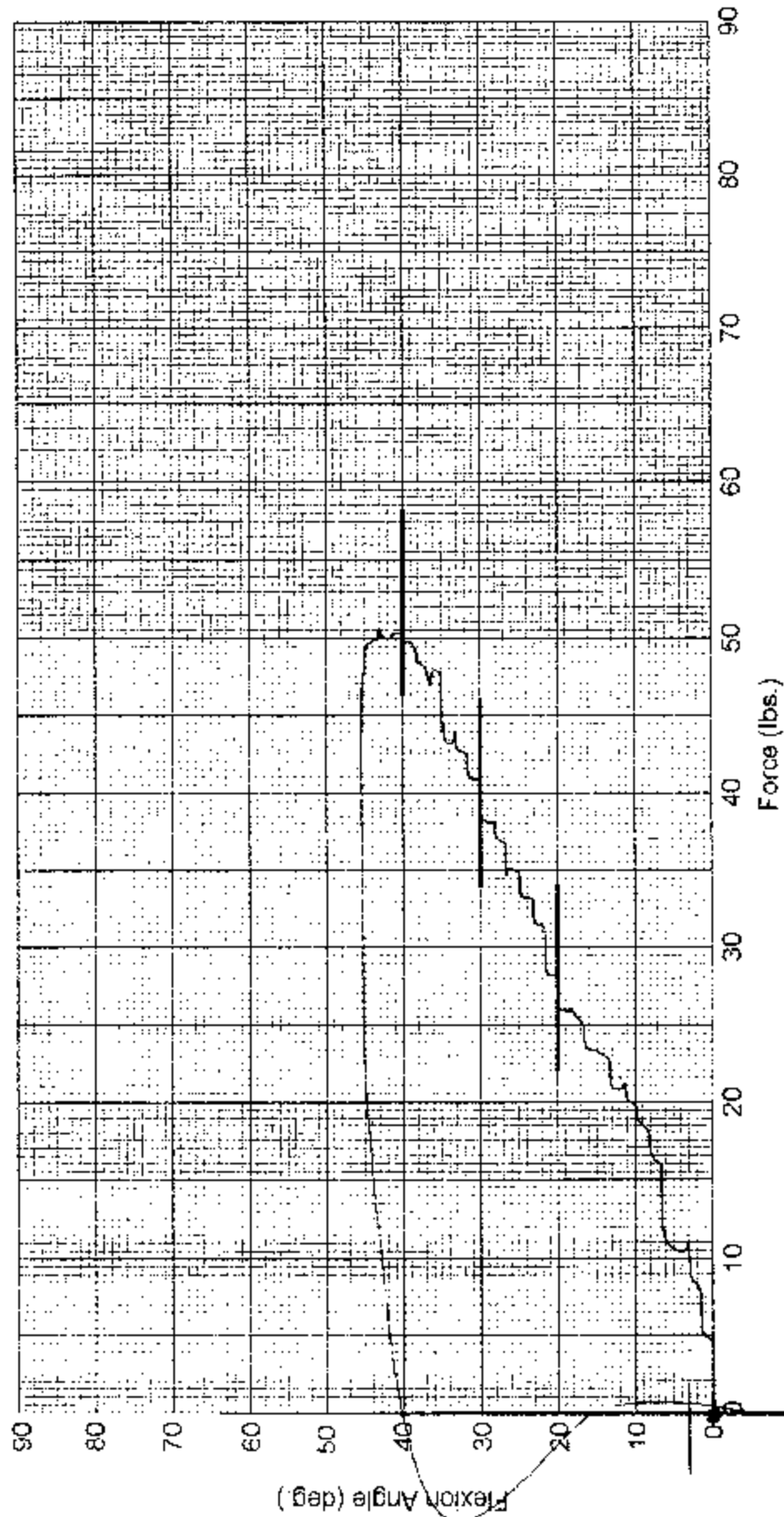
Performed By

Temp

71°

Humidity

31%



Hybrid II Lumbar Spine Flexion Test

FM-052-CERT-005-R00

PC32002.00-00000

POST TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 015 Sequential Test Number: 1
 Date: February 28, 2003 Laboratory Technician: B. Swiecicki

PART	ITEMS CHECKED	COMMENTS
SKIN	VISUAL INSPECTION	OK
HEAD	VISUAL, BALLAST, ACCELEROMETER MOUNT	OK
NECK	VISUAL, CABLE TORQUE	OK
SPINE BOX	VISUAL, BALLAST, WELDMENT, ACCELEROMETER MOUNT	OK
RIB CAGE	VISUAL, MEASURE, STIFFENERS	OK
STERNUM	VISUAL	OK
LUMBAR SPINE	VISUAL	OK
ABDOMEN	VISUAL	OK
PELVIS	VISUAL, PALPATE, ACCELEROMETER MOUNT	OK
UPPER LEGS	VISUAL	OK
KNEES	VISUAL, STOPS, INSERTS	OK
LOWER LEGS	VISUAL, RANGE OF MOTION	OK
ANKLES	VISUAL, RANGE OF MOTION	OK
FEET	VISUAL, RANGE OF MOTION	OK
JOINTS	1 TO 2 g RANGE	OK
OTHER	NONE	-

REMARKS: None

CALIBRATION TEST RESULTS

POST TEST

SID NO.: 016

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
Date: February 28, 2003 Laboratory Technician: B. Swiecicki

TEST	COMMENTS
EXTERNAL DIMENSIONS	Passed all requirements.
LATERAL THORAX IMPACT TEST	Passed all requirements.
LATERAL PELVIS IMPACT TEST	Passed all requirements.
HEAD DROP TEST*	Passed all requirements.
ABDOMINAL COMPRESSION TEST*	Passed all requirements.
LUMBAR FLEXION TEST*	Passed all requirements.

* Test not required for SID certification.

REMARKS: None

**EXTERNAL DIMENSIONS
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
Date: February 28, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	902
RH- Rib Height (mm)	502 - 520	513
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	236
KH- Knee Pivot from Back Line (mm)	511 - 526	521
KV- Knee Pivot to Floor (mm)	490 - 505	495
HW- Hip Width (mm)	356 - 391	368

REMARKS: None

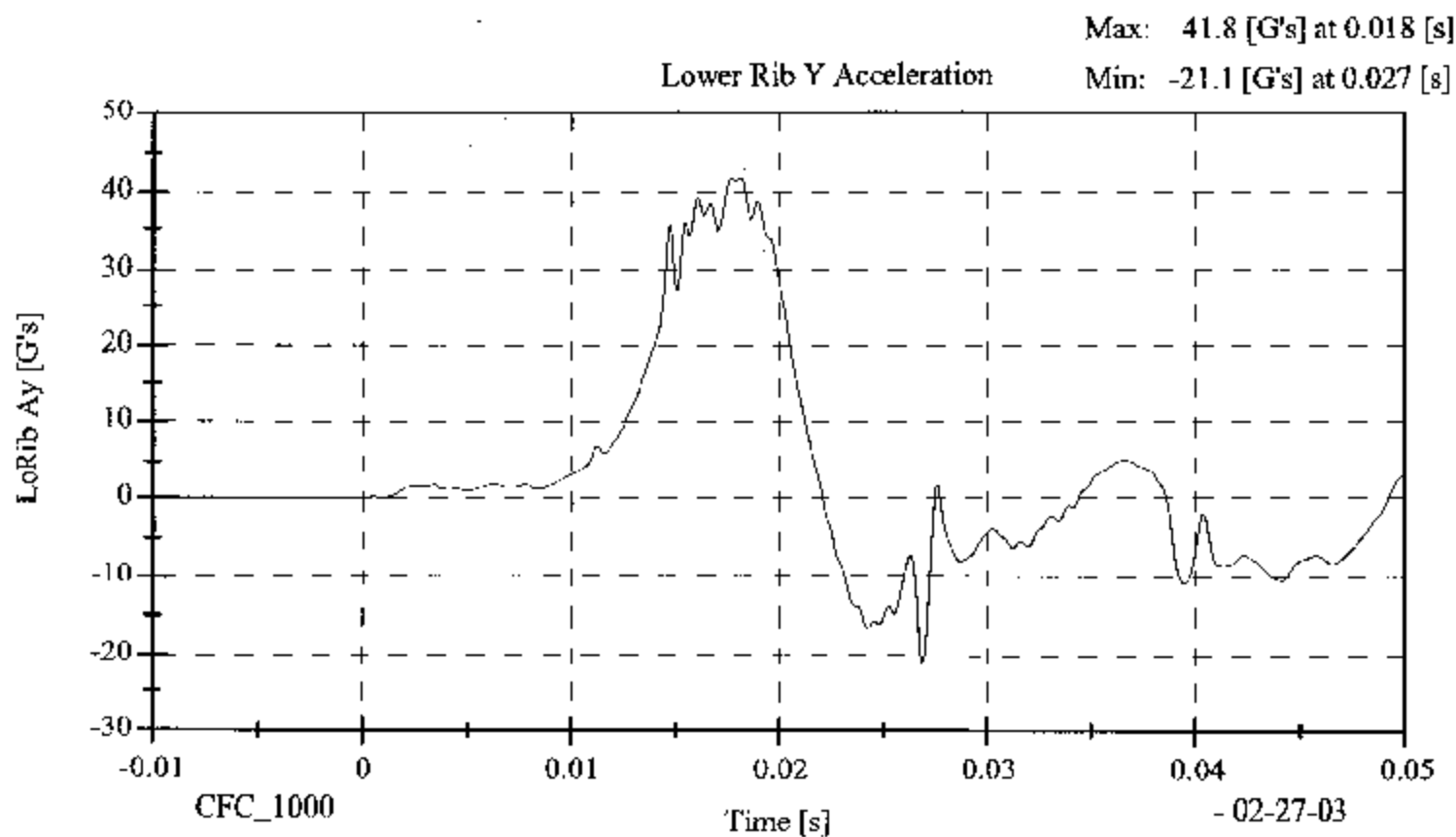
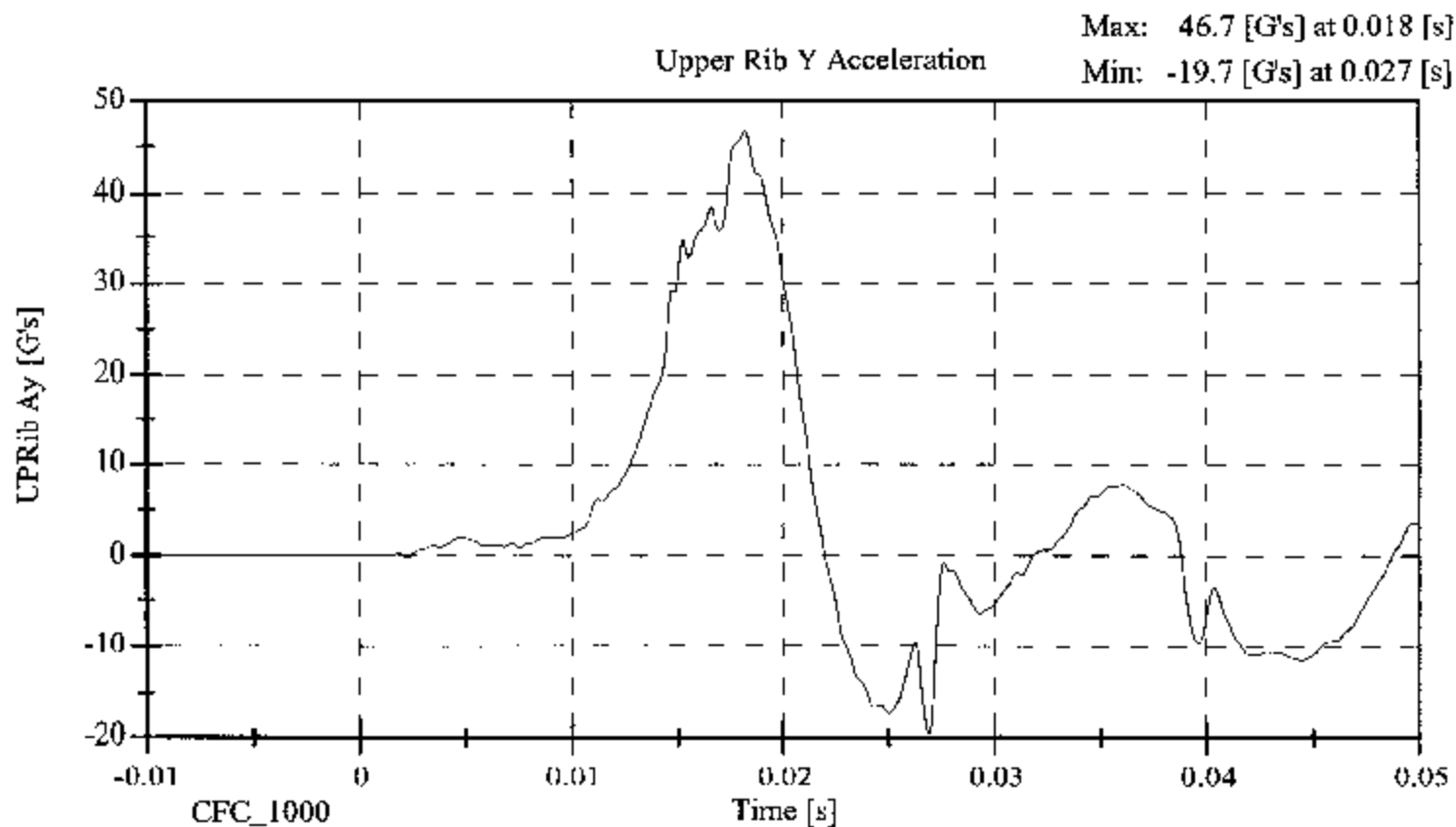
**LATERAL THORAX IMPACT TEST
POST TEST**

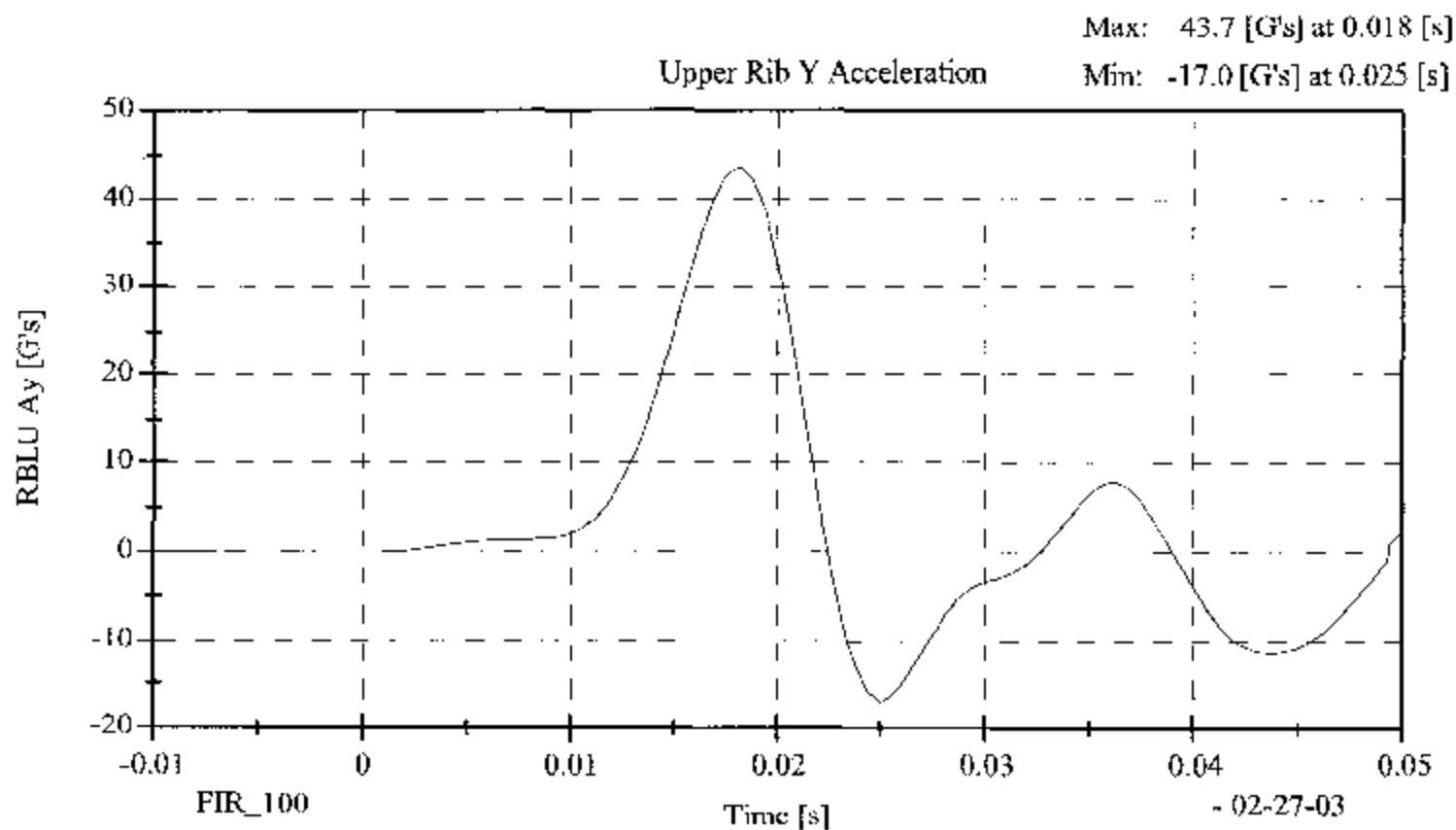
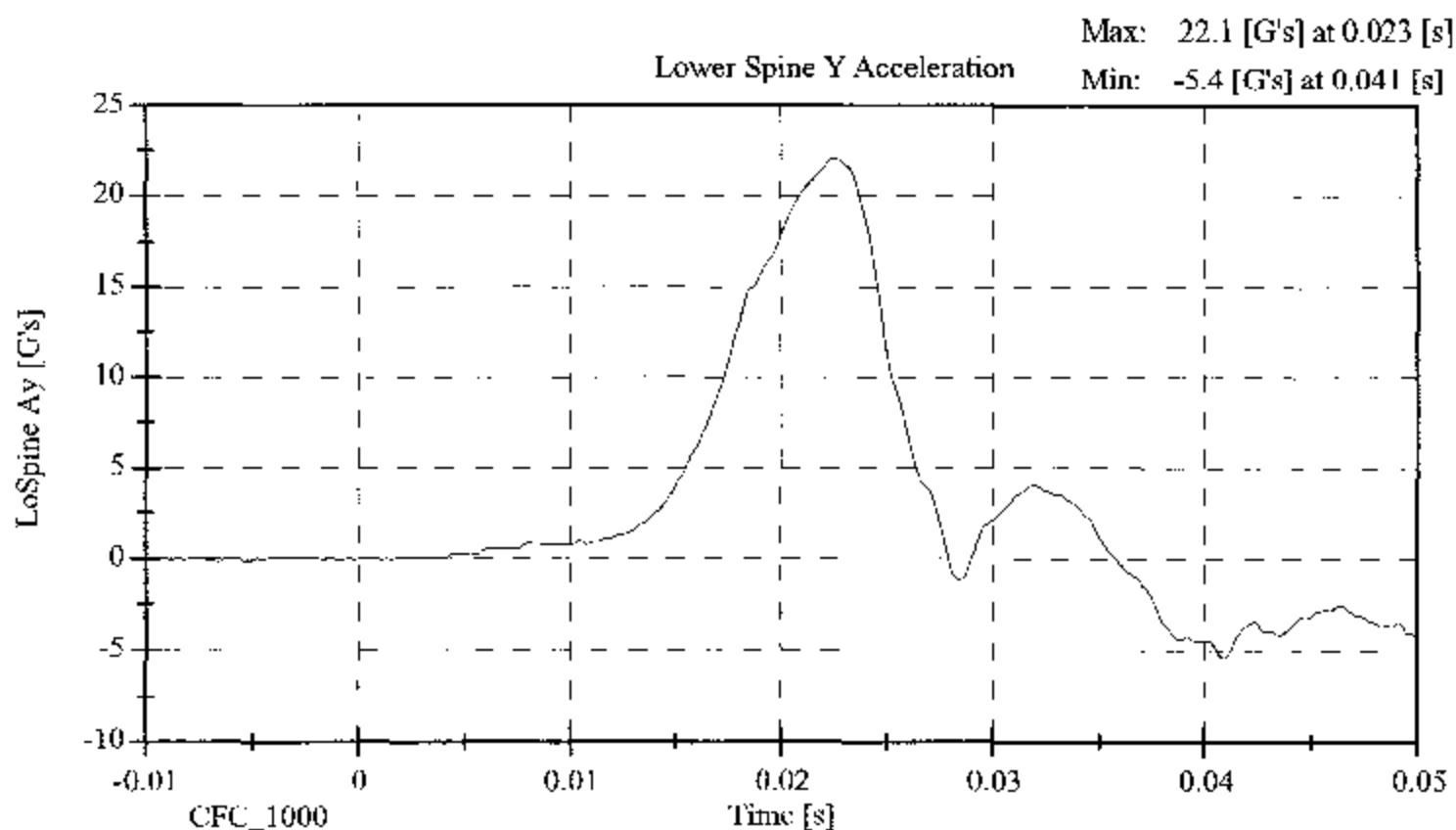
CONFIGURED FOR LEFT SIDE IMPACT

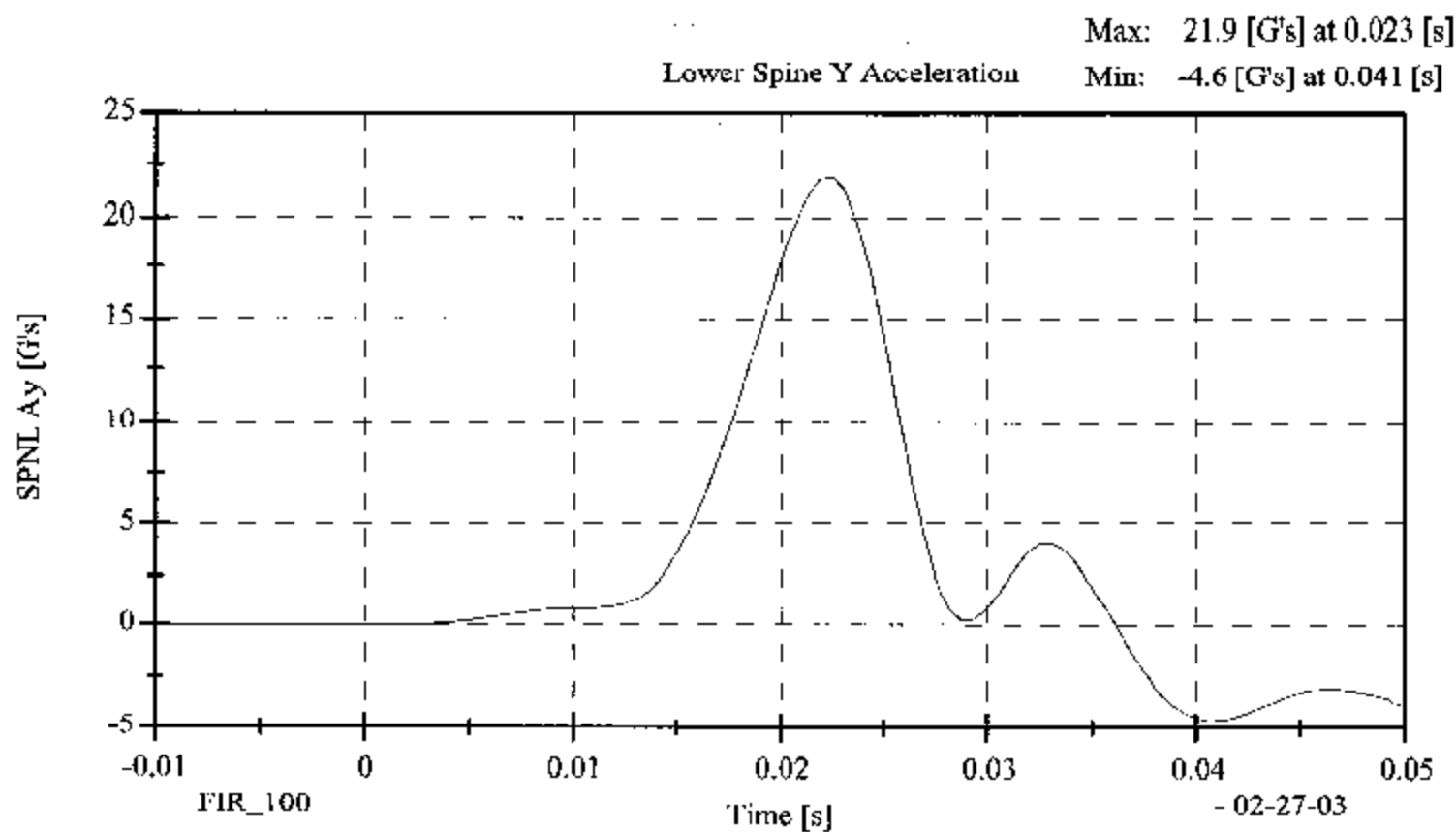
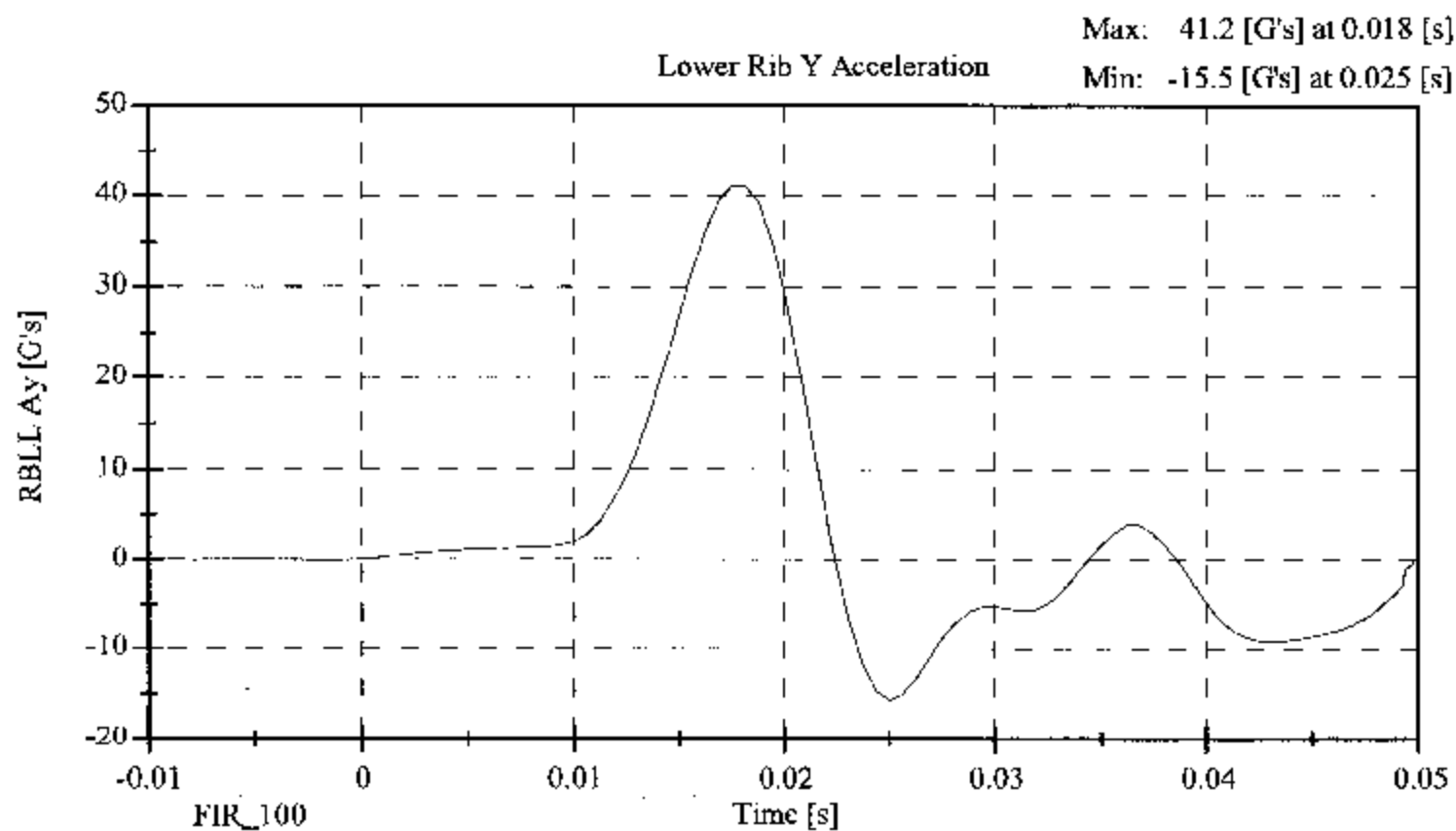
SID Serial No.:	<u>016</u>	Sequential Test Number:	<u>1</u>
Date:	<u>February 27, 2003</u>	Laboratory Technician:	<u>B. Swiecicki</u>

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	33
PROBE SPEED (m/s)	4.27 - 4.33	4.30
UPPER RIB (g's)	37 - 46	43.75
LOWER RIB (g's)	37 - 46	41.17
LOWER SPINE (g's)	15 - 22	21.87

REMARKS: None







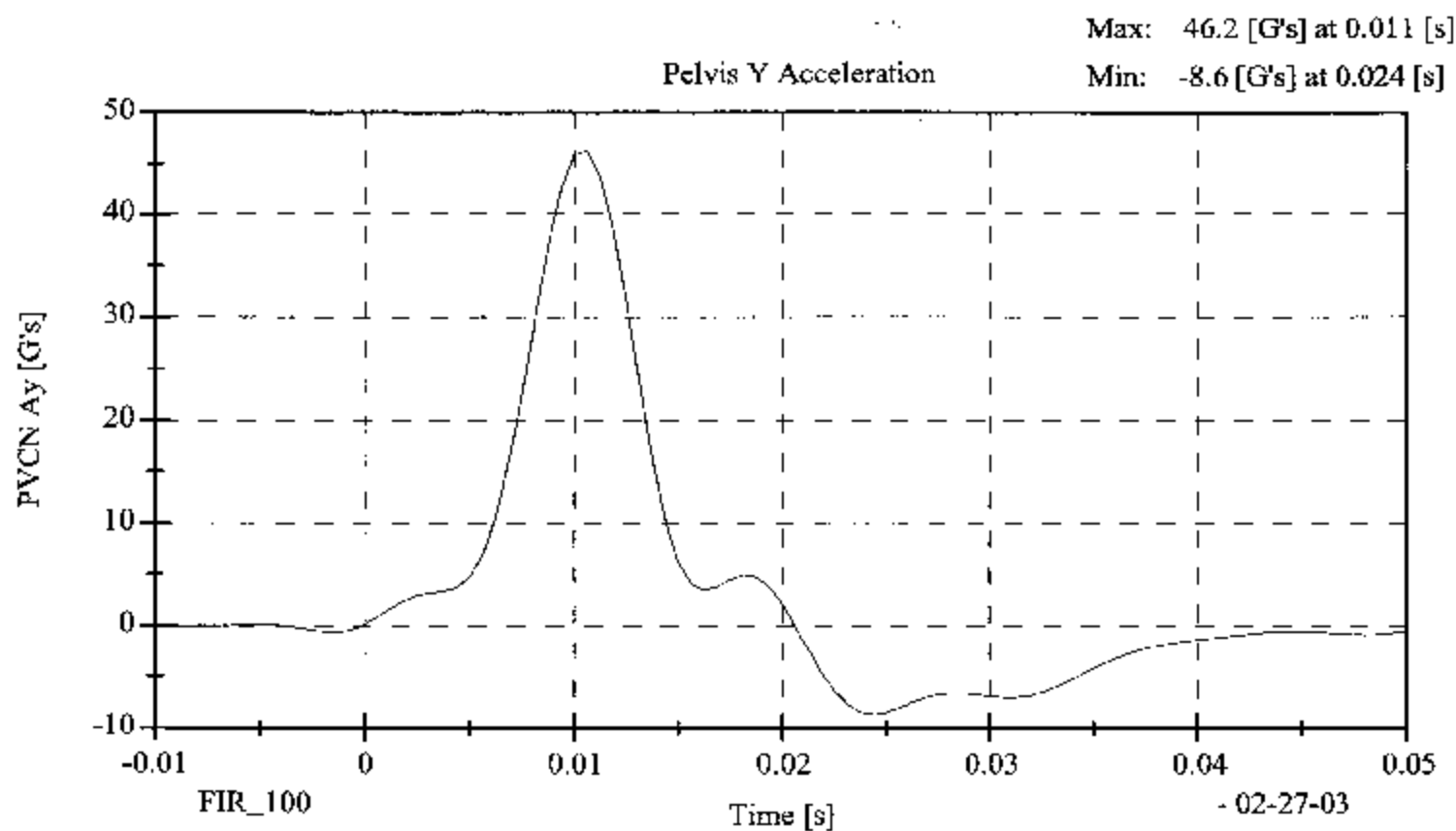
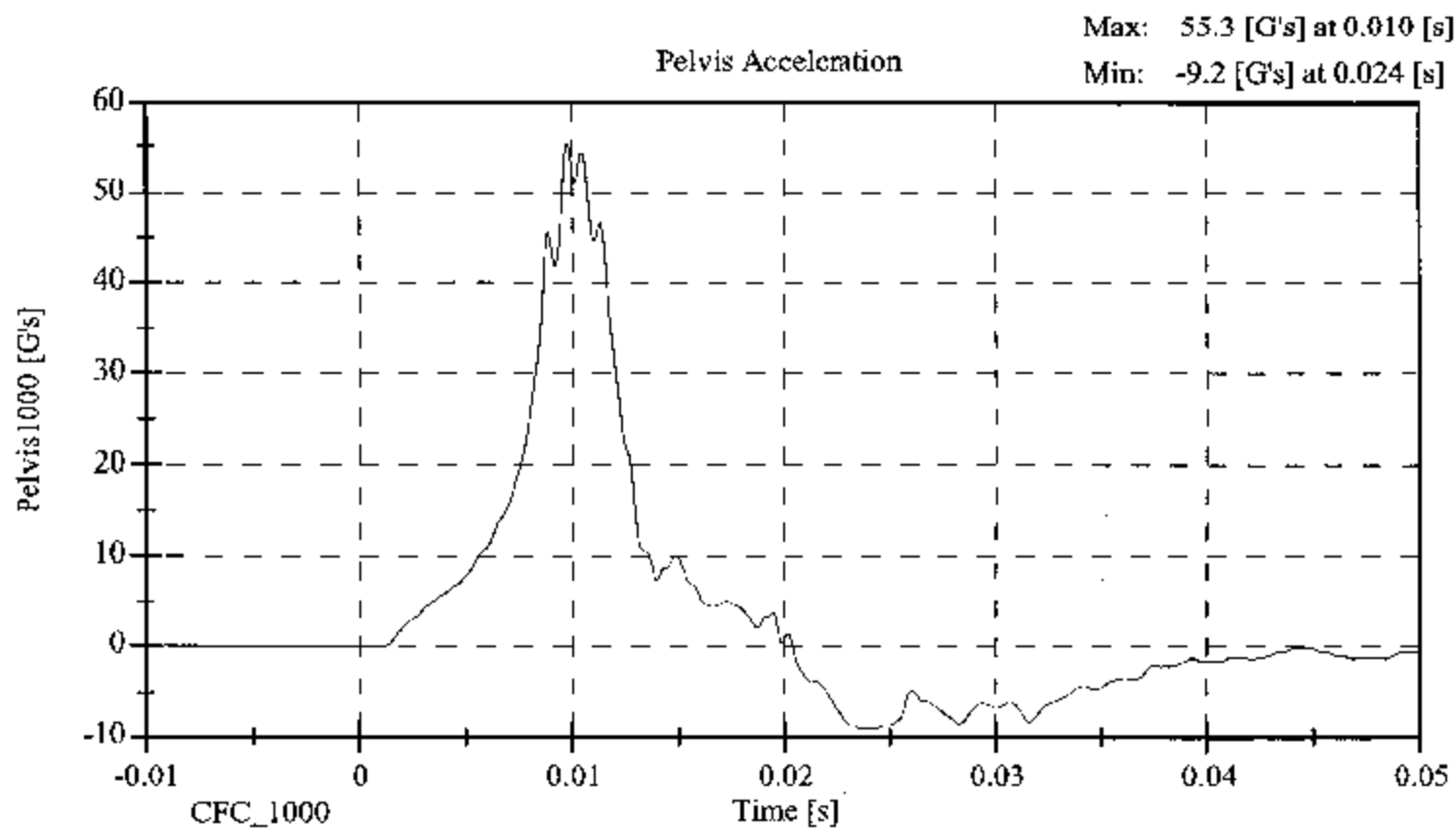
**LATERAL PELVIS IMPACT TEST
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.:	<u>016</u>	Sequential Test Number:	<u>1</u>
Date:	<u>February 27, 2003</u>	Laboratory Technician:	<u>B. Swiecicki</u>

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	33
PROBE SPEED (m/s)	4.27 - 4.33	4.31
PELVIS ACCELERATION (g's)	40 - 60	46.16

REMARKS: None



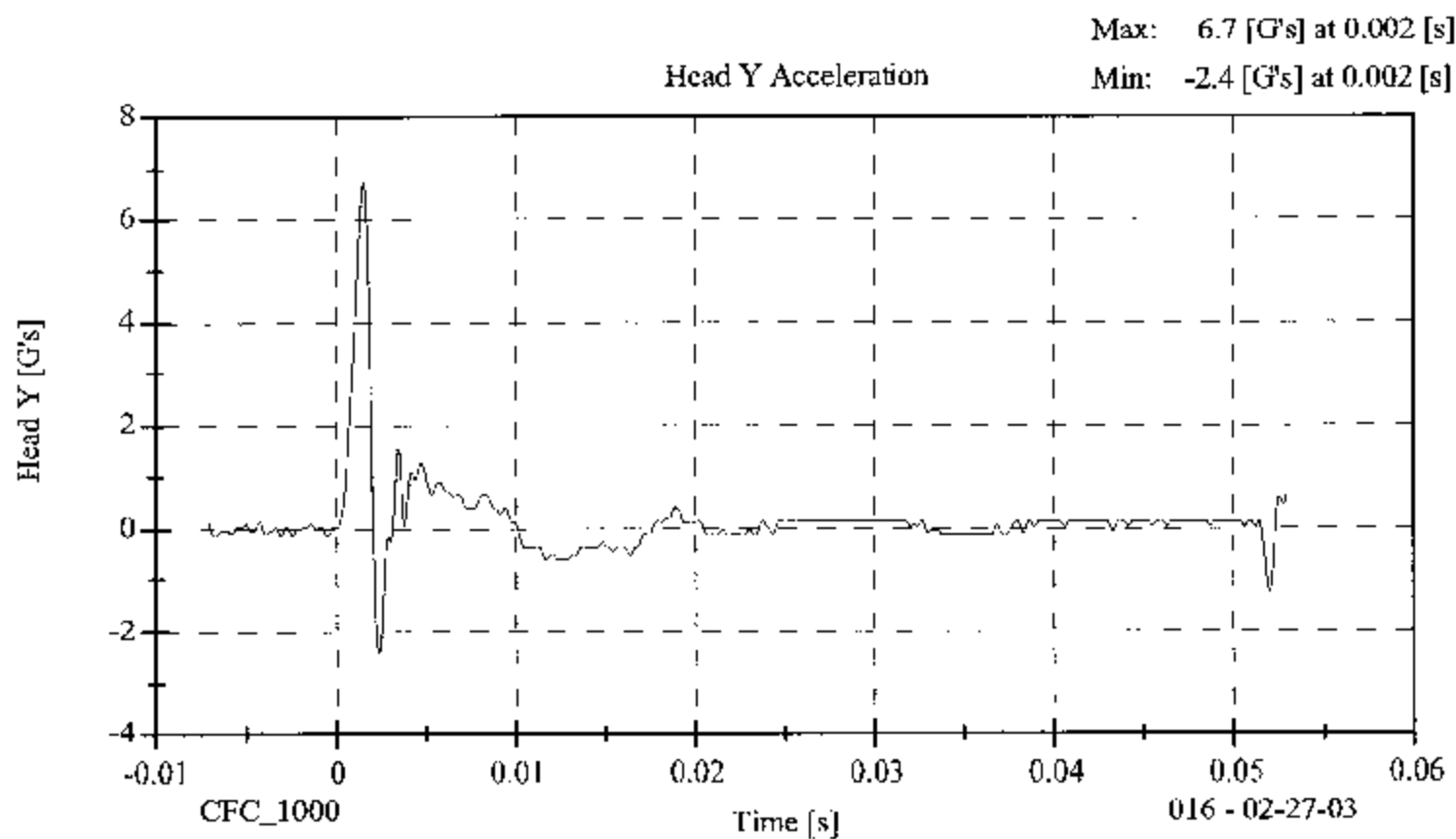
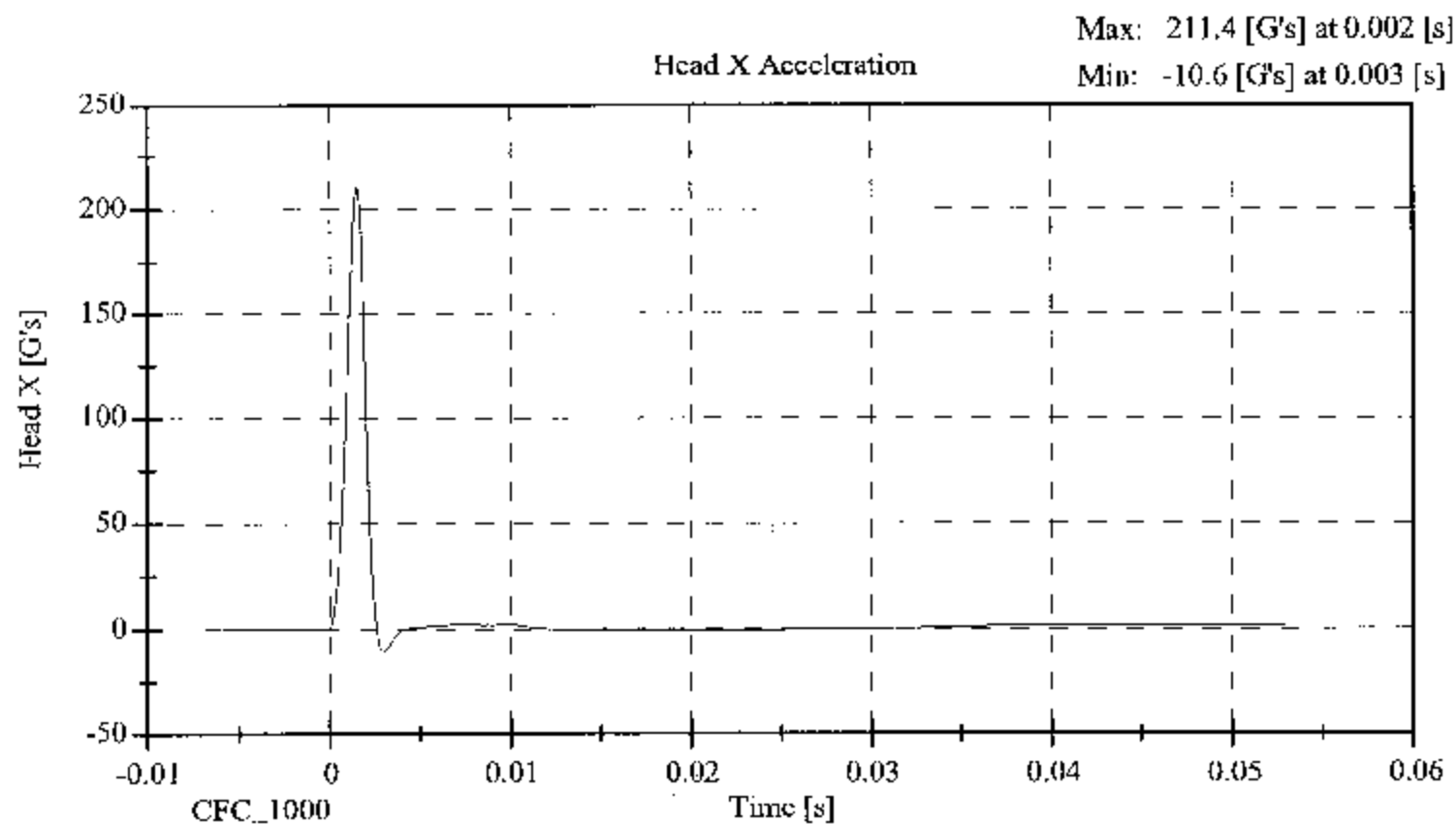
**HEAD DROP TEST
POST-TEST**
(Test not required for SID certification)

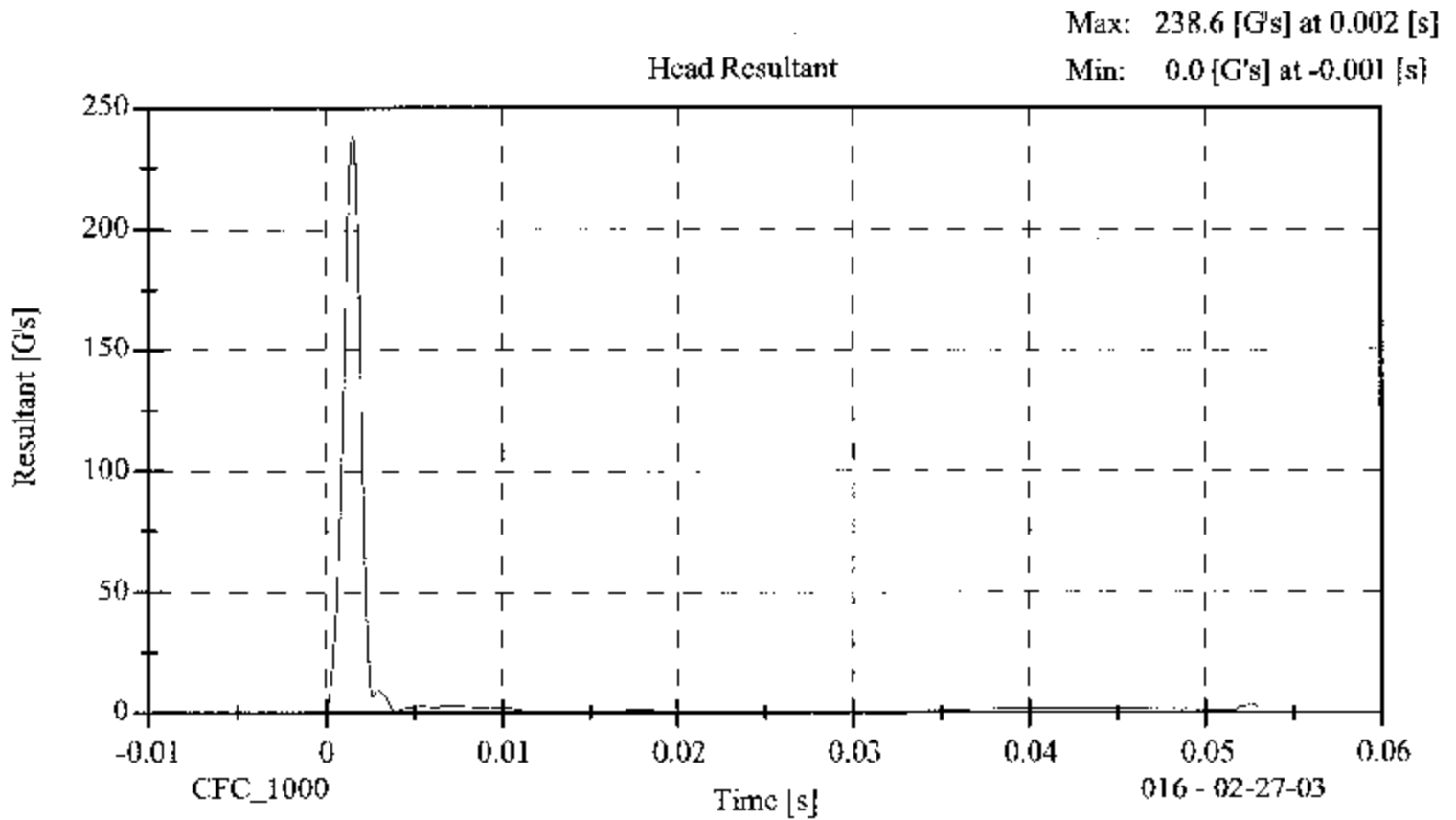
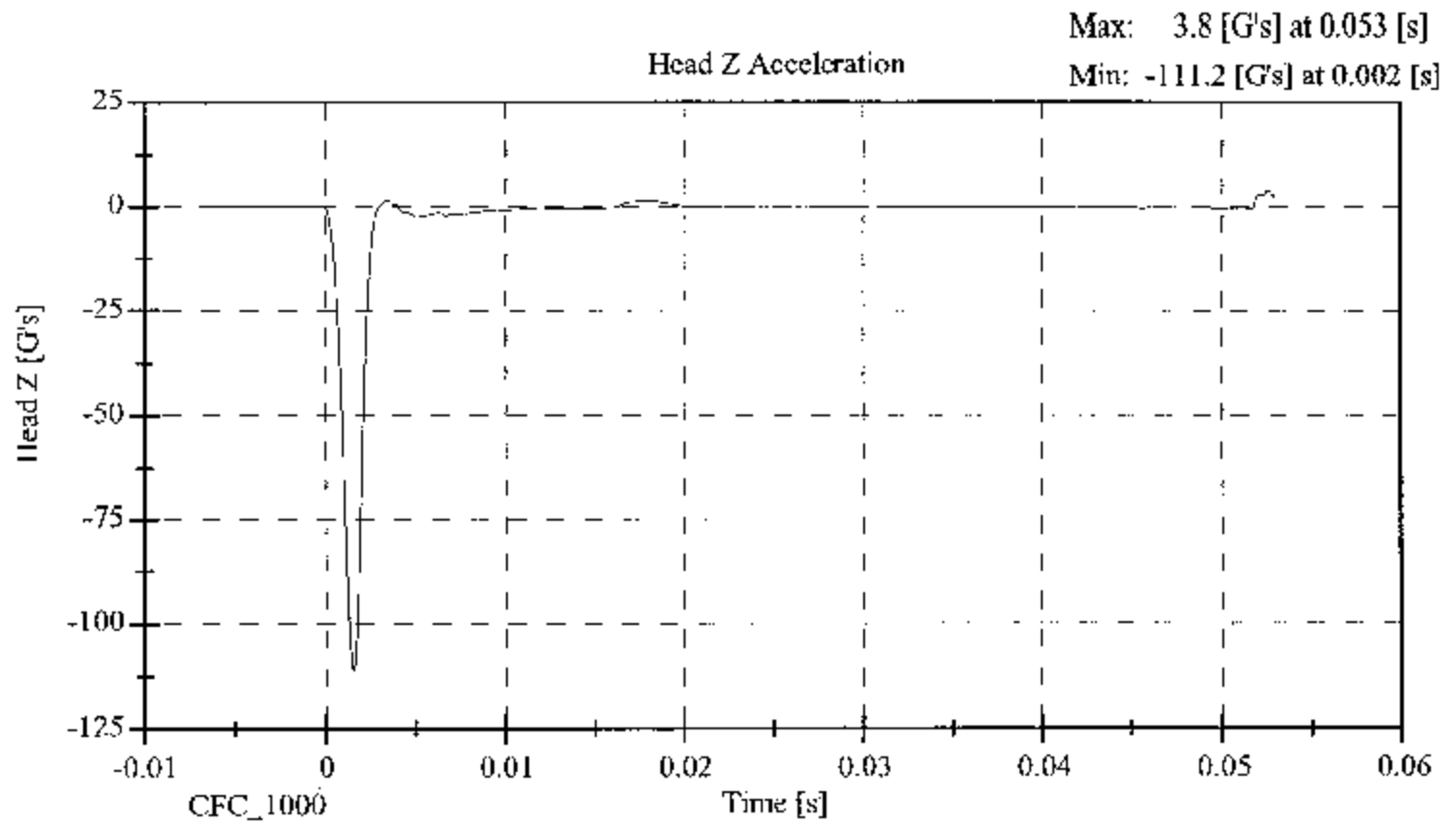
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
Date: February 27, 2003 Laboratory Technician: H. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.1
RELATIVE HUMIDITY (%)	10 - 70	35
PEAK RESULTANT ACCELERATION (Gs)	210 - 260	238.60
PEAK LATERAL ACCELERATION (Gs)	Not to Exceed 10	6.75
UNIMODAL CRITERIA ABOVE 100 Gs (ms)	0.9 - 1.5	1.22

REMARKS: None





**ABDOMINAL COMPRESSION TEST
POST TEST**

(Test not required for SID certification)

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
Date: February 28, 2003 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31
FORCE @ 13 mm (N)	104 - 162	112.1
FORCE @ 19 mm (N)	163 - 221	178.4
FORCE @ 25 mm (N)	222 - 280	252.7
FORCE @ 33 mm (N)	325 - 391	367.9

REMARKS: None

Dummy S/N 016

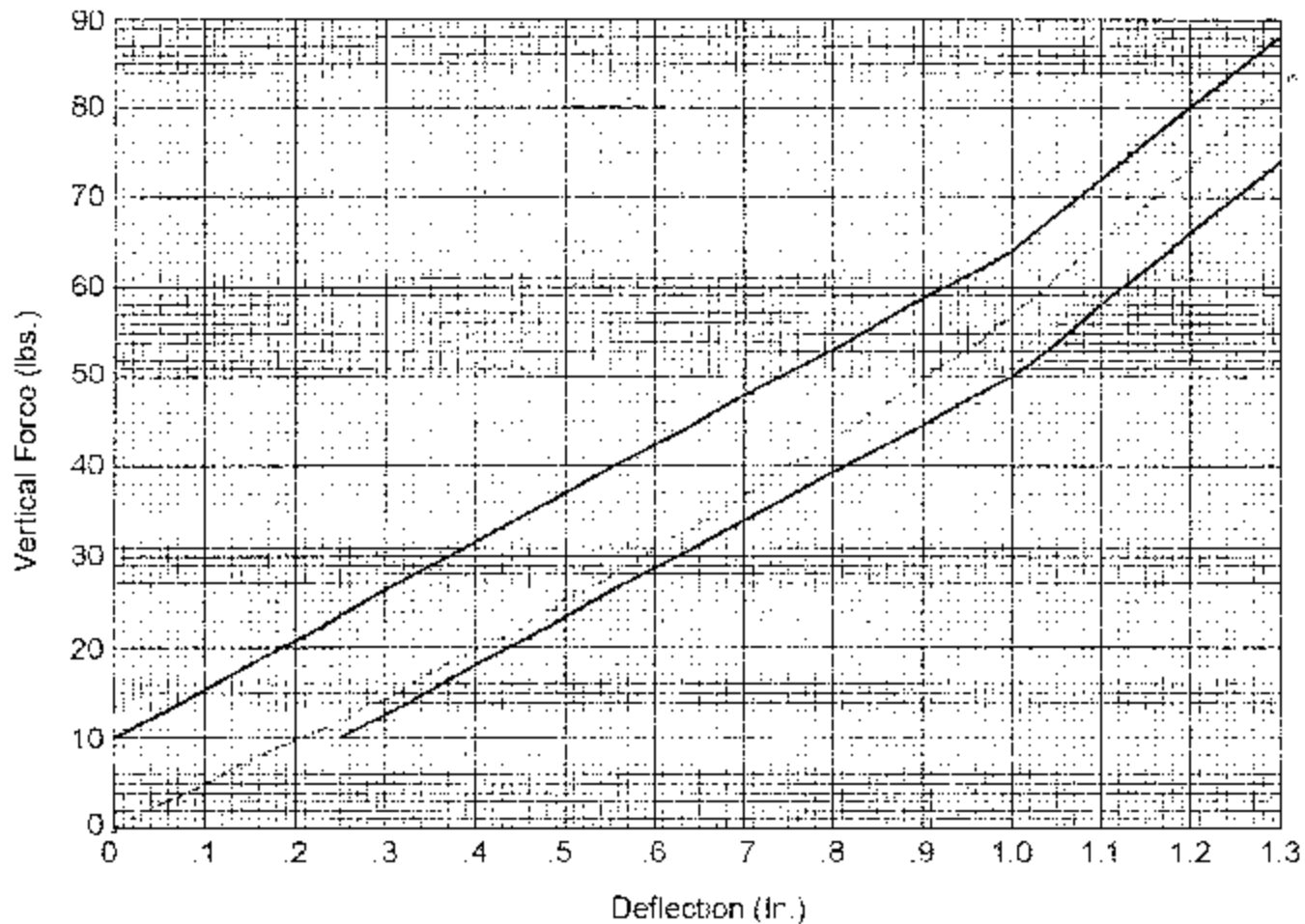
W/A _____

Date 2-28-02

Performed By [Signature]

Temp. 71°

Humidity 31%



Hybrid II
Abdomen Static Press

LUMBAR FLEXION TEST
POST TEST
(Test not required for SID certification)

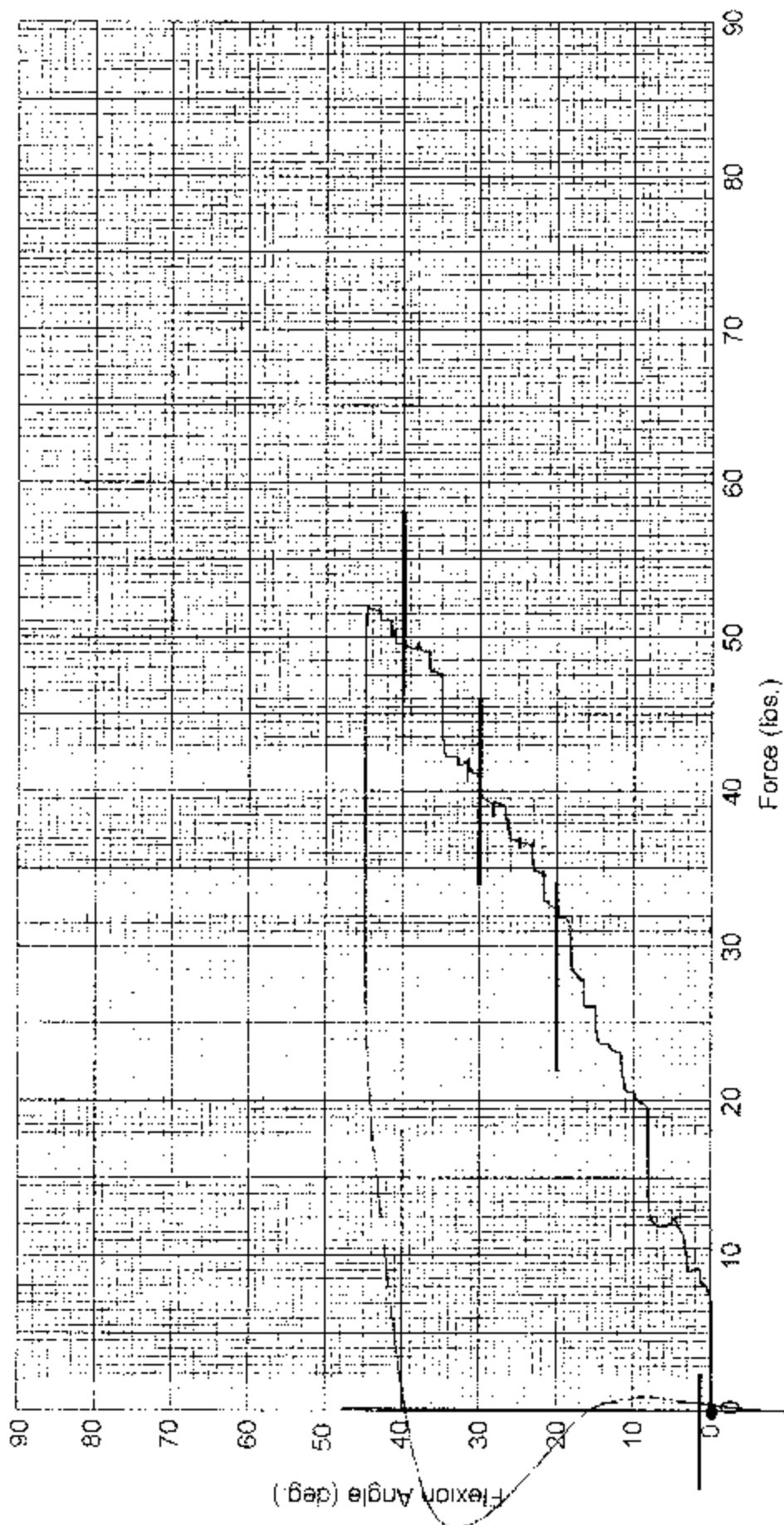
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
Date: February 28, 2003 Laboratory Technician: B. Swieticki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
TEMPERATURE (°C)	18.9 - 25.5	21.7
RELATIVE HUMIDITY (%)	10 - 70	31
FORCE @ 0° (N)	0 - 26.7	0.0
FORCE @ 20° (N)	97.8 - 151.2	143.2
FORCE @ 30° (N)	151.2 - 204.6	180.1
FORCE @ 40° (N)	204.6 - 258	220.1
RETURN ANGLE	12° max.	1.3°

REMARKS: None

Dummy S/N 616
W/A
Date 2-28-03
Performed By
Temp. 71°
Humidity 30%



Hybrid II Lumbar Spine Flexion Test

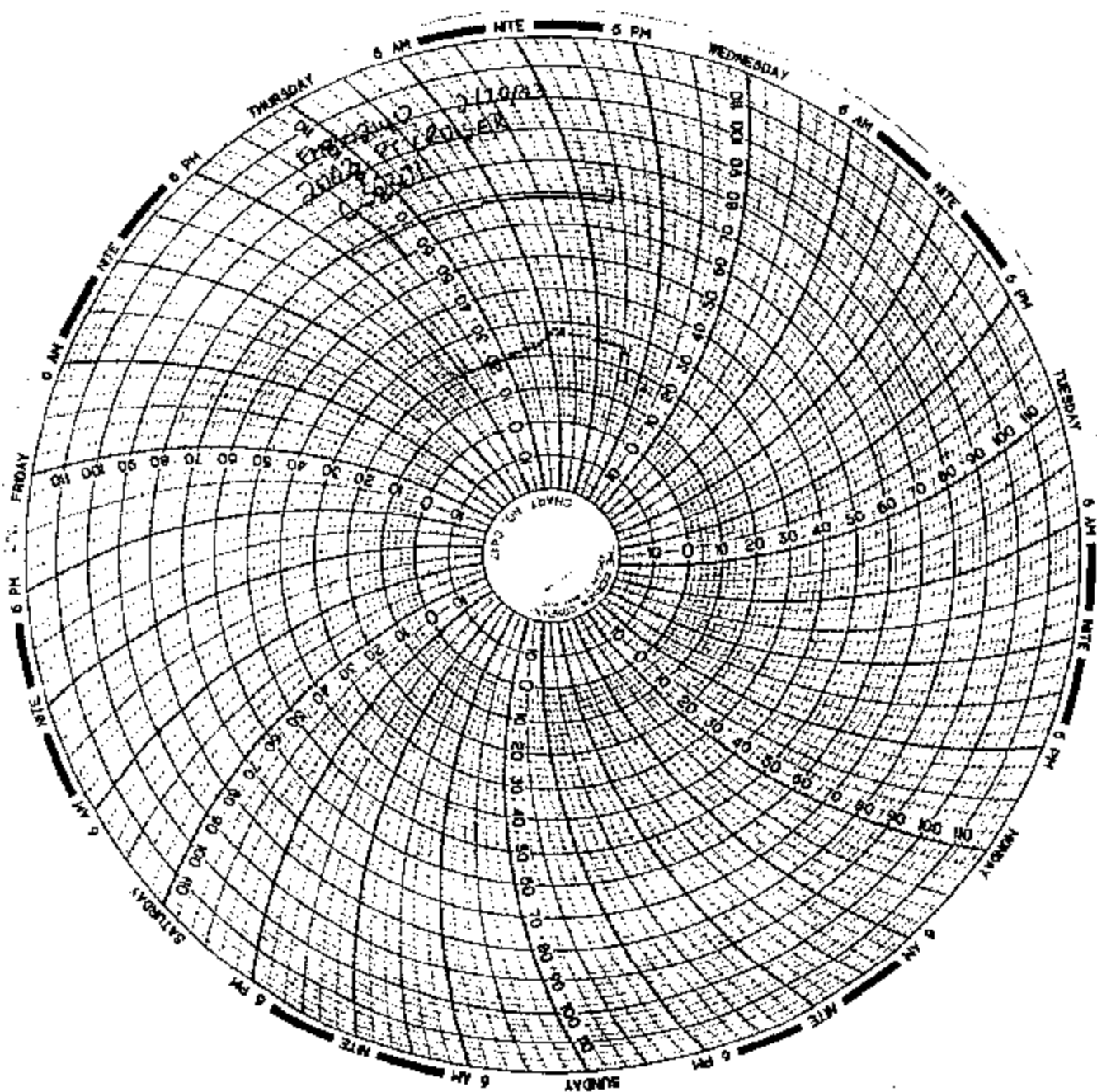
POST TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial No.: 016 Sequential Test Number: 1
 Date: February 28, 2003 Laboratory Technician: B. Swiecicki

PART	ITEMS CHECKED	COMMENTS
SKIN	VISUAL INSPECTION	OK
HEAD	VISUAL, BALLAST, ACCELEROMETER MOUNT	OK
NECK	VISUAL, CABLE TORQUE	OK
SPINE BOX	VISUAL, BALLAST, WELDMENT, ACCELEROMETER MOUNT	OK
RIB CAGE	VISUAL, MEASURE, STIFFENERS	OK
STERNUM	VISUAL	OK
LUMBAR SPINE	VISUAL	OK
ABDOMEN	VISUAL	OK
PELVIS	VISUAL, PALPATE, ACCELEROMETER MOUNT	OK
UPPER LEGS	VISUAL	OK
KNEES	VISUAL, STOPS, INSERTS	OK
LOWER LEGS	VISUAL, RANGE OF MOTION	OK
ANKLES	VISUAL, RANGE OF MOTION	OK
FEET	VISUAL, RANGE OF MOTION	OK
JOINTS	1 TO 2 g RANGE	OK
OTHER	NONE	

REMARKS: None

TEMPERATURE TRACE



APPENDIX D

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

SID INSTRUMENTATION

	FRONT SID NO.: 015		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD AX	AC-P23993	ENDEVCO	10/04/02
HEAD AY	AC-P23939	ENDEVCO	10/04/02
HEAD AZ	AC-P23999	ENDEVCO	10/04/02
UPPER RIB	AC-P16862	ENDEVCO	02/18/03
LOWER RIB	AC-P16656	ENDEVCO	02/18/03
LOWER SPINE	AC-P16866	ENDEVCO	02/18/03
PELVIS	AC-P16676	ENDEVCO	02/18/03
UPPER RIB REDUNDANT	AC-P23156	ENDEVCO	02/18/03
LOWER RIB REDUNDANT	AC-P16645	ENDEVCO	02/18/03
LOWER SPINE REDUNDANT	AC-P16823	ENDEVCO	02/18/03
PELVIS REDUNDANT	AC-P16843	ENDEVCO	02/18/03

	REAR SID NO.: 016		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD AX	AC-P23960	ENDEVCO	10/10/02
HEAD AY	AC-P23940	ENDEVCO	10/09/02
HEAD AZ	AC-P23899	ENDEVCO	10/10/02
UPPER RIB	AC-P18524	ENDEVCO	02/17/03
LOWER RIB	AC-P18533	ENDEVCO	02/17/03
LOWER SPINE	AC-P18514	ENDEVCO	02/17/03
PELVIS	AC-P18519	ENDEVCO	02/17/03
UPPER RIB REDUNDANT	AC-P18528	ENDEVCO	02/17/03
LOWER RIB REDUNDANT	AC-P18518	ENDEVCO	02/17/03
LOWER SPINE REDUNDANT	AC-P18688	ENDEVCO	02/17/03
PELVIS REDUNDANT	AC-P18531	ENDEVCO	02/17/03

REMARKS: None

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

VEHICLE AND MDB INSTRUMENTATION

	VEHICLE AND MDB INSTRUMENTS		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
RIGHT FRONT SILL (X)	AC-BB51	ENDEVCO	02/11/03
RIGHT FRONT SILL (Y)	AC-J31042	ENDEVCO	02/10/03
RIGHT FRONT SILL (Z)	AC-J32791	ENDEVCO	02/11/03
RIGHT REAR SILL (X)	AC-J32383	ENDEVCO	01/21/03
RIGHT REAR SILL (Y)	AC-J29805	ENDEVCO	01/21/03
RIGHT REAR SILL (Z)	AC-J25745	ENDEVCO	01/21/03
REAR FLOORPAN ABOVE AXLE (X)	AC-P16813	ENDEVCO	02/11/03
REAR FLOORPAN ABOVE AXLE (Y)	AC-P17255	ENDEVCO	02/11/03
REAR FLOORPAN ABOVE AXLE (Z)	AC-P17145	ENDEVCO	02/11/03
LEFT REAR SILL (Y)	AC-J32787	ENDEVCO	01/21/03
LEFT FRONT SILL (Y)	AC-J33071	ENDEVCO	09/30/02
LEFT FRONT DOOR CENTERLINE (Y)	-	-	-
RIGHT REAR SEAT OCCUPANT COMP. (Y)	AC-Y30	ICS	09/05/02
MID REAR OF LEFT FRONT DOOR (Y)	-	-	-
LEFT FRONT DOOR UPPER CL (Y)	-	-	-
MID REAR OF LEFT REAR DOOR (Y)	-	-	-
LEFT REAR DOOR UPPER CL (Y)	-	-	-
LOWER LEFT B- PILLAR (Y)	AC-8084-018	ICS	11/11/02
MIDDLE LEFT B-PILLAR (Y)	AC-8084-022	ICS	11/20/02
LOWER LEFT A-PILLAR (Y)	AC-6917-020	ICS	11/20/02
UPPER LEFT A-PILLAR (Y)	AC-8083-037	ICS	11/21/02
FRONT SEAT TRACK (Y)	AC-8084-024	ICS	11/11/02
REAR SEAT TRACK (Y)	AC-P17288	ENDEVCO	09/17/02
VEHICLE CG (X)	AC-B11408	ENDEVCO	02/10/03
VEHICLE CG (Y)	AC-B10827	ENDEVCO	02/10/03
VEHICLE CG (Z)	AC-A13513	ENDEVCO	02/10/03
MDB CG (X)	AC-C16682	ENDEVCO	09/05/02
MDB CG (Y)	AC-CJ54	ENDEVCO	09/05/02
MDB CG (Z)	AC-GK12	ENDEVCO	09/05/02
MDB REAR FRAME MEMBER (X)	AC-CX05	ENDEVCO	09/05/02
MDB REAR FRAME MEMBER (Y)	AC-C16685	ENDEVCO	09/05/02

REMARKS: None